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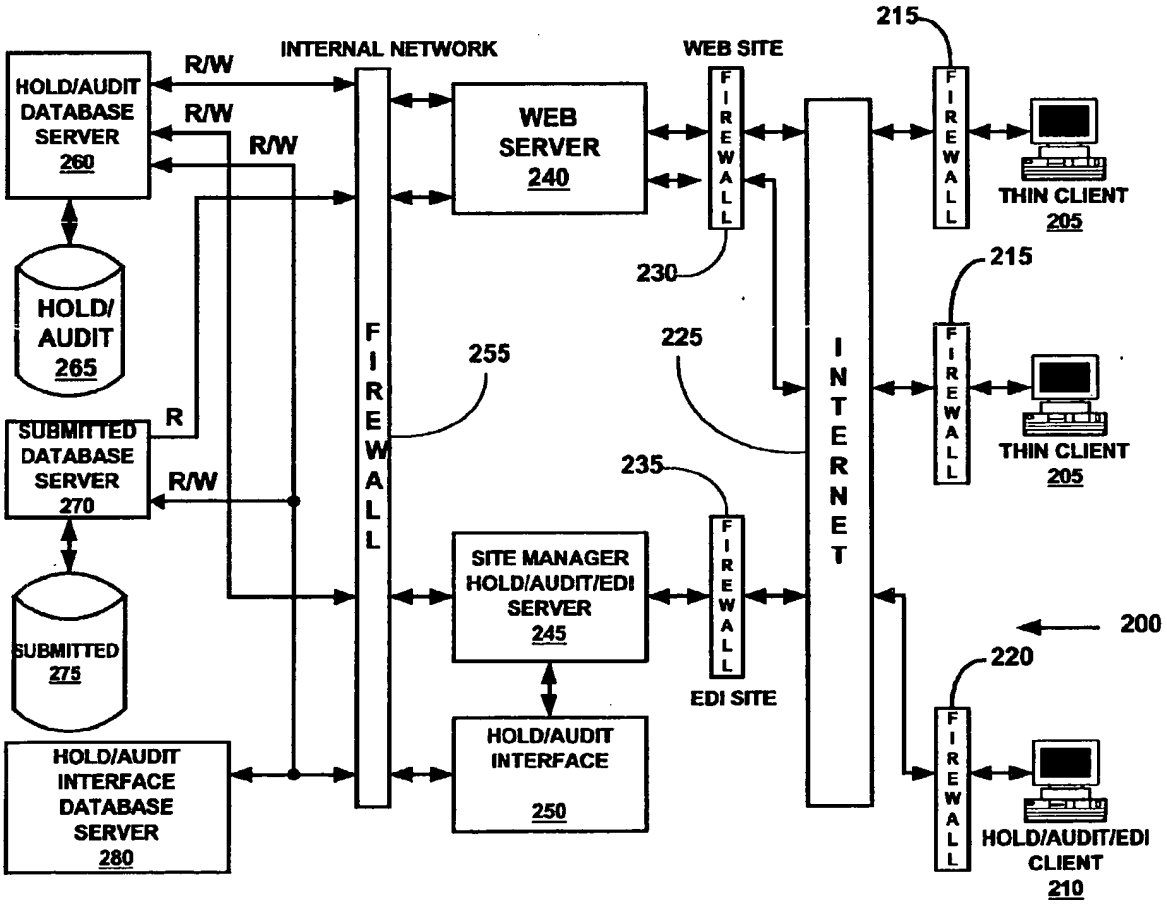
(54) GESTION EN LIGNE DE LA LIVRAISON DE PRODUITS
(54) ON-LINE MANAGEMENT OF PRODUCT DELIVERY



(57) A computerized system for managing the scheduling and delivery of products.

Docket No. 21702.52.05

ON-LINE MANAGEMENT OF PRODUCT DELIVERY

Abstract of the Disclosure

A computerized system for managing the scheduling and delivery of products.

Docket No. 21702.52.05

ON-LINE MANAGEMENT OF PRODUCT DELIVERY

Cross-Reference To Related Applications

The present application claims the benefit of the filing date of U.S. provisional patent application serial number 60/172,361, attorney docket number 21702.52, filed on December 16, 1999.

Copyright Notice

Background of the Invention

This invention relates to automated scheduling and delivery of products and, more particularly, to computer implemented methods for interactive automated scheduling and delivery of products.

The business-to-business purchase and sale of products has historically been primarily a phone/fax based activity. Such products are typically traded and brokered in industries such as, for example, paper, steel, trucking, food, energy, and flowers. Traders responsible for selling production, purchasing supplies, and procuring the physical delivery of such products typically communicate bid/ask prices by phone at one or more active market centers. Often these trades have been facilitated by phone-based Brokers, commissioned intermediaries that facilitate transactions between buyers and sellers, acting as agent not principal (i.e., Brokers do not take title or otherwise get involved in the delivery or payment aspects of the transaction.)

In this traditional market, as trades were consummated, confirmations were then faxed, scheduling documentation was exchanged, and each trading partner used its own internal back-office systems to manage the trade through settlement. The majority of physical energy continues to be traded by this process today. However, such a complex transaction chain has proved to be an

extremely inefficient process which results in high transaction costs, missed trading opportunities, and complex operating procedures.

The present invention is directed to overcoming or at least minimizing the limitations of the conventional processes for trading and delivering products.

Summary of the Invention

According to one aspect of the present invention, a computer implemented method of managing the delivery of products is provided that includes entering data relating to the delivery of the products using a user interface, interim storing some of the data in an intermediate database, submitting some of the data for processing by the system, and storing the submitted data in the intermediate database and a submitted database.

According to another aspect of the present invention, a system for managing the delivery of products is provided that includes means for entering data relating to the delivery of the products using a user interface, means for interim storing some of the data in an intermediate database, means for submitting some of the data for processing by the system, and means for storing the submitted data in the intermediate database and a submitted database.

According to another aspect of the present invention, a computer program for managing the delivery of products is provided that includes instructions for entering data relating to the delivery of the products using a user interface, instructions for interim storing some of the data in an intermediate database, instructions for submitting some of the data for processing by the system, and instructions for storing the submitted data in the intermediate database and a submitted database.

According to another aspect of the present invention, a computer implemented method for managing the scheduling and delivery of products is provided that includes providing an N-tiered database structure including interim stored and submitted scheduling and delivery data.

According to another aspect of the present invention, a system for managing the scheduling and delivery of products is provided that includes an

N-tiered database structure including interim stored and submitted scheduling and delivery data.

According to another aspect of the present invention, a computer program is provided that includes instructions for providing an N-tiered database structure including interim stored and submitted scheduling and delivery data.

According to another aspect of the present invention, a system for managing the delivery of products is provided that includes one or more thin clients adapted to enter data related to the delivery of the products, an intermediate database for storing interim saved data and submitted data related to the delivery of the products, a submitted database for storing submitted data related to the delivery of the products, and a host computer coupled to the thin clients, the intermediate database, and the submitted database adapted to process the submitted data.

According to another aspect of the present invention, a computerized database for a system for managing the delivery of products is provided that includes an intermediate database including interim stored data and submitted data, and a submitted database including the submitted data.

According to another aspect of the present invention, a system for managing the delivery of products is provided that includes means for permitting one or more thin clients to enter data related to the delivery of the products, means for storing interim saved data and submitted data, means for storing submitted data, and means for processing the submitted data.

Brief Description of the Drawings

FIG. 1 is a schematic illustration of a commercial transaction.

FIG. 2 is a schematic illustration of an embodiment of a computer implemented system for managing the scheduling and delivery of products.

FIG. 3 is a schematic illustration of a preferred embodiment for processing screen entry data, interim saved data, and submitted data in the system of FIG. 2.

FIG. 4 is a flow chart illustration of a preferred embodiment for processing screen entry data, interim saved data, and submitted data in the system of FIG. 2.

FIG. 5 is a flow chart illustration of a preferred embodiment of a process for managing the scheduling and delivery of products using the system of FIG. 2.

FIG. 5a is an illustration of an embodiment of a screen display for the main menu of the process of FIG. 5.

FIG. 6a is a flow chart illustration of a portion of an embodiment of the login process of the process of FIG. 5.

FIG. 6b is a flow chart illustration of another portion of the embodiment of the login process of the process of FIG. 5.

FIG. 6c is an illustration of an embodiment of a screen display for the login process of FIGS. 6a and 6b.

FIG. 7a is flow chart illustration of an embodiment of a maintaining nominations process for the process of FIG. 5.

FIG. 7b is an illustration of an embodiment of a screen display for the maintaining nominations process of FIG. 7a.

FIG. 7c is an illustration of an embodiment of a screen display for the cycle selection process of the maintaining nominations process of FIG. 7a.

FIG. 8a is flow chart illustration of an embodiment of a reviewing nominations process for the process of FIG. 5.

FIG. 8b is an illustration of an embodiment of a screen display for the reviewing nominations process of FIG. 8a.

FIG. 9a is flow chart illustration of an embodiment of a viewing nomination status process for the process of FIG. 5.

FIG. 9b is an illustration of an embodiment of a screen display for the viewing nomination status process of FIG. 9a.

FIG. 10a is flow chart illustration of an embodiment of a viewing nomination activity process for the process of FIG. 5.

FIG. 10b is an illustration of an embodiment of a screen display for the viewing nomination activity process of FIG. 10a.

FIG. 11a is flow chart illustration of a portion of an embodiment of a maintaining confirmations process for the process of FIG. 5.

FIG. 11b is flow chart illustration of another portion of the embodiment of the maintaining confirmations process for the process of FIG. 5.

FIG. 11c is an illustration of an embodiment of a screen display for the maintaining confirmations process of FIGS. 11a and 11b.

FIG. 12a is flow chart illustration of an embodiment of a viewing confirmation status process for the process of FIG. 5.

FIG. 12b is an illustration of an embodiment of a screen display for the viewing confirmation status process of FIG. 12a.

FIG. 13a is flow chart illustration of an embodiment of a maintaining predetermined allocations process for the process of FIG. 5.

FIG. 13b is an illustration of an embodiment of a screen display for the maintaining predetermined allocations process of FIG. 13a.

FIG. 14a is flow chart illustration of an embodiment of a viewing predetermined allocation status process for the process of FIG. 5.

FIG. 14b is an illustration of an embodiment of a screen display for the viewing predetermined allocation status process of FIG. 14a.

FIG. 15 is an illustration of an embodiment of a screen display for the reports options for the process of FIG. 5.

FIG. 15a is flow chart illustration of an embodiment of a viewing customer reports process for the process of FIG. 5.

FIG. 15b is an illustration of an embodiment of a screen display for the viewing customer reports process of FIG. 15a.

FIG. 16a is flow chart illustration of an embodiment of a viewing partner reports process for the process of FIG. 5.

FIG. 16b is an illustration of an embodiment of a screen display for the viewing partner reports process of FIG. 16a.

FIG. 17a is flow chart illustration of an embodiment of a viewing contract reports process for the process of FIG. 5.

FIG. 17b is an illustration of an embodiment of a screen display for the viewing contract reports process of FIG. 17a.

FIG. 18a is a flow chart illustration of an embodiment of a maintaining capacity release offers, bids & awards process for the process of FIG. 5.

FIG. 18b is an illustration of an embodiment of a screen display for the maintaining capacity release offers, bids & awards process of FIG. 18a.

FIG. 19a is a flow chart illustration of a portion of an embodiment of a viewing and entering system wide notices process for the process of FIG. 5.

FIG. 19b is a flow chart illustration of another portion of the embodiment of the viewing and entering system wide notices process of FIG. 19a.

FIG. 19c is a flow chart illustration of another portion of the embodiment of the viewing and entering system wide notices process of FIG. 19a.

FIG. 19d is an illustration of an embodiment of a screen display for the maintaining capacity release offers, bids & awards process of FIGS. 19a, 19b and 19c.

FIG. 19e is an illustration of an embodiment of a screen display for the system wide notice detail option of the maintaining capacity release offers, bids & awards process of FIGS. 19a, 19b and 19c.

FIG. 20a is flow chart illustration of an embodiment of a viewing operationally available and unsubscribed capacity (OAUC) reports process for the process of FIG. 5.

FIG. 20b is an illustration of an embodiment of a screen display for the OAUC reports process of FIG. 20a.

FIG. 21a is a flow chart illustration of the administration options process of the process of FIG. 5.

FIG. 21b is an illustration of an embodiment of a screen display of the main menu for the administration options process of FIG. 21a.

FIG. 22a is flow chart illustration of an embodiment of the user manager of the process of FIG. 21a.

FIG. 22b is an illustration of an embodiment of a screen display of the user manager for the administration options process of FIG. 21a.

FIG. 22c is an illustration of an embodiment of another screen display of the user manager for the administration options process of FIG. 21a.

FIG. 23a is flow chart illustration of an embodiment of the group manager of the process of FIG. 21a.

FIG. 23b is an illustration of an embodiment of a screen display of the group manager for the administration options process of FIG. 21a.

FIG. 23c is an illustration of an embodiment of another screen display of the group manager for the administration options process of FIG. 21a.

FIG. 24a is flow chart illustration of an embodiment of the menu manager of the process of FIG. 21a.

FIG. 24b is an illustration of an embodiment of a screen display of the menu manager for the administration options process of FIG. 21a.

FIG. 24c is an illustration of an embodiment of another screen display of the menu manager for the administration options process of FIG. 21a.

FIG. 24d is an illustration of an embodiment of another screen display of the menu manager for the administration options process of FIG. 21a.

FIG. 24e is an illustration of an embodiment of another screen display of the menu manager for the administration options process of FIG. 21a.

FIG. 25a is flow chart illustration of an embodiment of the application settings option of the process of FIG. 21a.

FIG. 25b is an illustration of an embodiment of a screen display of the application settings for the administration options process of FIG. 21a.

FIG. 26a is flow chart illustration of an embodiment of the database verification of the process of FIG. 21a.

FIG. 26b is an illustration of an embodiment of a screen display of the database verification for the administration options process of FIG. 21a.

FIG. 27a is an illustration of an embodiment of a screen display of the server information for the administration options process of FIG. 21a.

FIG. 28a is an illustration of an embodiment of a screen display of the main menu for the online help for the administration options process of FIG. 21a.

Detailed Description of the Illustrative Embodiments

As illustrated in FIG. 1, in a commercial transaction 100, a user 105 contracts to deliver a product 110 to a recipient 115 using a delivery resource provider 120. The product 110 may include, for example, oil, gas, electrical energy, telecommunication signals, durable goods, perishable goods, or other products. The delivery resource provider 120 may include, for example, a pipeline, a trucking line, an ocean cargo line, a railway cargo line, or other delivery system. In a preferred embodiment, the commercial transaction 100 is at least partially implemented using one or more of the following products: Altrade™, Altra™ Power, Altra™ Gas, Altra™ Pipeline, Altra™ Risk and Altra™ Exchange, all available from Altra Energy Technologies in Houston, Texas.

In a preferred embodiment, in order to effectuate the delivery of the product 110, the user 105 further contracts with the delivery source provider 120 to define the details of the delivery of the product 110 to the recipient 115, which may include, for example: (1) the delivery route, (2) the amount of product delivered, (3) the upstream sources of the product, (4) the downstream destinations of the product, (5) when the product will be delivered, (6) the allocation of the delivered product. As will be recognized by persons having ordinary skill in the art, having benefit of the present disclosure, the term upstream sources generally refers to sources of the product that are upstream relative to the delivery source provider 120. As will be recognized by persons having ordinary skill in the art, having benefit of the present disclosure, the term downstream destinations generally refers to destinations of the product that are downstream relative to the delivery source provider 120. As will be recognized by persons having ordinary skill in the art, having benefit of the

present disclosure, the term allocation generally refers to amount of delivered product allocated to corresponding recipient destinations.

The present system preferably permits the user 105 and the delivery source provider 120 to define the contractual relationship regarding the shipment and delivery of the product 110 by providing an interactive system for managing the scheduling and delivery of the product 110 that permits the user 105 and delivery source provider 120 to enter, view, and maintain nominations, predetermined allocations, and confirmations. As will be recognized by persons having ordinary skill in the art, having the benefit of the present disclosure, the term nomination generally refers to the process of proposing the details of the shipment and delivery of the product 110. As will be recognized by persons having ordinary skill in the art, having the benefit of the present disclosure, the term predetermined allocations generally refers to the process of defining the allocation of the delivered product among one or more recipients of the product. As will be recognized by persons having ordinary skill in the art, having the benefit of the present disclosure, the term confirmation generally refers to the process of approving and/or modifying a proposed confirmation or allocation.

In a preferred embodiment, the present system for managing the scheduling and delivery of products is implemented as a Web based browser that allows users of the system to enter, view, and maintain nominations, predetermined allocations, and confirmations via the Internet.

In a particularly preferred embodiment, the present system for managing the scheduling and delivery of products is implemented using the AltraWeb™ Version 3.0 Web-based browser product available from Altra Energy Technologies in Houston, Texas. In a preferred embodiment, the system for managing the scheduling and delivery of products permits delivery resource providers (e.g., pipelines, local distribution companies (LDCs), and gathering companies) and delivery resource users (e.g., shippers, agents, operators and confirming parties) to enter, view and maintain nominations, predetermined allocations and confirmations via the Internet.

In a preferred embodiment, the present system for managing the scheduling and delivery of products is further implemented as an optional module of the Altra™ Pipeline product available from Altra Energy Technologies in Houston, Texas.

In a preferred embodiment, the present system for managing the scheduling and delivery of products is further implemented in combination with the Altra™ Pipeline On-System Gas Control module and the Altra™ Pipeline GISB interface, both available from Altra Energy Technologies in Houston, Texas. As will be recognized by persons having ordinary skill in the art, having the benefit of the present disclosure, the term GISB refers to the Gas Industry Standards Board. As will be recognized by persons having ordinary skill in the art, having the benefit of the present disclosure, the term GISB interface refers to a file server and/or database management interface that complies with one or more GISB standards.

In a preferred embodiment, the present system for managing the scheduling and delivery of products permits delivery service providers and users to increase their efficiency and streamline their nomination processes by off-loading the time-consuming task of entering and confirming nominations to shippers and operators and maintaining the predetermined allocations.

In a preferred embodiment, the present system permits delivery service users (e.g., shippers, agents, and operators) and delivery service providers (e.g., pipelines, local distribution companies (LDCs), and gathering companies) to: (1) enter, view, edit and maintain nominations; (2) enter, view, edit and maintain confirmations; (3) enter, view, edit and maintain predetermined allocations; (4) generate customer, partner and contract reports; (5) enter, view, edit and maintain capacity release offers, bids & awards, including offers, system wide notices, and operationally available and unsubscribed capacity (OAUC); and (6) various administrative functions that permit a user to customize the operation of the system.

In a preferred embodiment, the present system is implemented as a server based application that enables users of the system to access the system

directly via the delivery service provider's website. Because the present system is server based there is no download required and the system uses the system user's Web browser. As a result, the service provider does not have to manage delivery of updates to end-users or worry about installation and compatibility issues. Furthermore, because the present system preferably uses the public Internet as the connection, users of the system can literally connect from anywhere – avoiding long distance charges that typically result from calling proprietary modem banks.

In a preferred embodiment, the present system permits users to view administrative information. In a preferred embodiment, the present system permits users to view data about transportation contracts and access information about other companies who do business with the delivery service provider 120. In a preferred embodiment, the present system permits users to: (1) view custody transfer contracts (those contracts on which the user's company has nomination rights (as either shipper or agent) with the delivery service provider; (2) view business partner information (the user can view a list of companies (including phone numbers) that do business with the delivery service provider. In a preferred embodiment, the view partner information can be disabled by delivery service providers who do not wish to share or are not required to share this information among their users. In a preferred embodiment, this option can also be configured to list either all or only certain types of business partners (i.e., shippers or agents).

In a preferred embodiment, the present system permits users of the system to manage nominations quickly and easily. In a preferred embodiment, the present system permits system users to enter, submit and edit nominations. In a preferred embodiment, the present system further supports the use of: (1) pathed; (2) pathed non-threaded; and (3) non-pathed nomination model types as defined by one or more GISB standards. In this manner, the present system permits system users to enter all of the information – from transportation paths to upstream sources and downstream destinations – that are typically needed to nominate the flow of gas on a transportation system. In a preferred

embodiment, nominations can also be amended to include: (1) additional paths as well as upstream and/or downstream; and (2) changes to an existing path.

In a preferred embodiment, the present system permits users of the system to maintain nominations. In a preferred embodiment, the present system also allows system users to view and edit nominations that have already been accepted by the delivery service provider. In a preferred embodiment, system users can increase or decrease product volumes and/or edit ranks for a single day as well as a range of days. As will be recognized by persons having ordinary skill in the art, having benefit of the present disclosure, the term rank generally refers to an indication of the priority to be used in determining the order in which nominations are scheduled. Examples of rank include Rank = 1 for the highest priority and Rank = 999 for the lowest priority.

In a preferred embodiment, the present system permits system users to view confirmation responses. In a preferred embodiment, after a nomination is input to the system, the delivery service provider, or other authorized user, validates it. If there is any reason to reject the nomination for specific form or content reasons, a confirmation response itemizing problems with the nomination is generated.

In a preferred embodiment, the present system permits system users to view nomination activity. In a preferred embodiment, the system permits system users to see the status of nominations for a particular meter and/or a contract for an entire month. As will be recognized by persons having ordinary skill in the art, having the benefit of the present disclosure, the term meter generally refers to a device for measuring the amount of product flow. In a preferred embodiment, the available information, which can be summarized by receipt/delivery meter category, includes: the amount nominated (submitted by the user, e.g., shipper or agent), the amount scheduled (any flow reductions caused by delivery service provider limitations/constraints), the amount confirmed (any flow reductions caused by limitations from the upstream or downstream confirming parties), the amount allocated (adjusted for actual measured flows) and monthly total volumes for the selected meter.

In a preferred embodiment, the present system permits system users to manage predetermined allocations. In a preferred embodiment, the system permits system users to enter, submit and edit predetermined allocations. By supporting all allocation tiers defined by the delivery service provider, the present system allows users (e.g., shippers and operators) to enter all of the information required to allocate the volumes to their respective parties.

In a preferred embodiment, the present system permits system users to view confirmations of predetermined allocations. In a preferred embodiment, after a predetermined allocation is input into the system, the delivery service provider validates it. If there is any reason to reject the predetermined allocation, a quick response itemizing problems is generated.

In a preferred embodiment, the present system permits system users to confirm product flows. In a preferred embodiment, the system permits system users to enter, edit, and submit confirmations of products flows at the confirmation levels defined by the service provider. In a preferred embodiment, the system permits confirming parties to confirm product flows, enter reduced volumes and provide reduction reason codes.

In a preferred embodiment, the present system permits system users to view confirmations of confirmed gas flows. In a preferred embodiment, after a gas flow confirmation is input into the system, the delivery service provider validates it. If there is any reason to reject the gas flow confirmation, a quick response itemizing problems is generated.

In a preferred embodiment, the present system permits system users to generate reports. In a preferred embodiment, the system permits system users to generate a contract report and/or a partner report. In a preferred embodiment, the system further permits system users to add new reports based on their specific requirements.

Referring to FIG. 2, a preferred embodiment of a system 200 for managing the scheduling and delivery of products will now be described. The system 200 is preferably used to manage the scheduling and delivery of natural gas products. More generally, as will be recognized by persons of ordinary skill

in the art, having the benefit of the present disclosure, the system 200 may be utilized to manage the scheduling and delivery of any product.

The system 200 preferably includes one or more thin clients 205, one or more hold/audit/edi clients 210, corresponding thin client firewalls 215, corresponding hold/audit/edi client firewalls 220, the Internet 225, a firewall 230, a firewall 235, a web server 240, a site manager hold/audit/edi server 245, a hold/audit interface 250, a firewall 255, a hold/audit database server 260, a hold/audit database 265, a submitted database server 270, a submitted database 275, and a hold/audit interface server 280.

The thin clients 205 are preferably coupled to the web server 240 via the Internet 225. In a preferred embodiment, the thin clients 205 are coupled to the web server 240 via the Internet 225 using a conventional web browser such as, for example, Netscape™ or Microsoft Internet Explorer™. As will be recognized by persons having ordinary skill in the art, having the benefit of the present disclosure, the term thin client generally refers to a client in a client/server environment that performs very little data processing. In a preferred embodiment, the thin client 205 processes only keyboard input and screen output, and all application processing is done in the web server 240. In this manner, the thin client 205 does not need system software updates. The thin clients 205 may, for example, be delivery service users 105 and/or delivery service providers 120.

In a preferred embodiment, the operating systems for the thin clients 205 include Windows 95/98 with TCP/IP or a Microsoft NT Workstation 4.0. In a preferred embodiment, the configurations for the thin clients 205 include: (1) Microsoft Internet Explorer 4.72 (or greater); (2) Intel P166 MHZ Pentium CPU (or higher); (3) 32MB RAM for Windows 95-98, 64MB for NT Workstation 4.0; (4) 15" SVGA Monitor; (5) 1MB of free hard drive space; and (6) 28.8 KB Modem or greater.

The hold/audit/edi clients 210 are preferably coupled to the site manager hold/audit/edi server 245 via the Internet 225. The hold/audit/edi clients 210 are preferably adapted to permit the recipient 115 to view transactions in the

system 200. As will be recognized by persons having ordinary skill in the art, having benefit of the present disclosure, the term EDI refers to electronic data interchange. In a preferred embodiment, the hold/audit/edi client 210 is adapted to permit the recipient 115 to view transactions in the system 200 using an industry-standard electronic data interchange communication standard. In a preferred embodiment, the hold/audit/edi client 210 is adapted to permit the recipient 115 to view transactions in the system 200 using the X-12 industry-standard electronic data interchange communication standard.

The thin client firewalls 215 are preferably coupled between the thin clients 205 and the Internet 225. As will be recognized by persons having ordinary skill in the art, the term firewall generally refers to a method for keeping a network secure.

The hold/audit/edi client firewalls 220 are preferably coupled between the hold/audit/edi client 210 and the Internet 225.

The Internet 225 is preferably coupled between the thin clients 205 and hold/audit/edi clients 210 and the web server 240 and the site manager hold/audit/edi server 245. More generally, the Internet 225 (or Web) may be replaced with, or supplemented by, one or more local-area-networks (LAN) and/or wide-area-networks (WAN).

The firewall 230 is preferably coupled between the Internet 225 and the web server 240.

The firewall 235 is preferably coupled between the Internet 225 and the site manager hold/audit/edi server 245.

The web server 240 is preferably coupled to the thin clients 205 via the Internet 225, the hold/audit database server 260, and the submitted database server 270. The web server 240 is preferably adapted to service the thin clients 205 using active server web pages. In this manner, the thin clients 205 preferably process only keyboard input and screen output, and all application processing is done in the web server 240. The web server 240 is preferably adapted to interface with the hold/audit database 265 via the hold/audit database server 260 and the submitted database 275 via the submitted database

server 270. In a preferred embodiment, the web server 240 is adapted to interface with the hold/audit database 265 and the submitted database 275 using the OLEDB (OLE DataBase) programming interface. As will be recognized by persons having ordinary skill in the art, OLEDB is a programming interface for data access available from Microsoft.

In a preferred embodiment, the web server 240 includes hardware having dual Intel Pentium/DEC Alpha Processors 300+ MHZ, and software having Windows NT 4.0 with Service Pack #4, Microsoft IIS 4.0 Web Server (Option Pack #4), Seagate Crystal Reports 7.0 Professional, and RDMS Client (Oracle for Windows NT or SQL Server Client).

The site manager hold/audit/edi server 245 is preferably coupled to the hold/audit/edi client 210 via the Internet 225, the hold/audit interface install 250, and the hold/audit database server 260. The site manager hold/audit/edi/server 245 is preferably adapted to interface with the hold/audit database 265 via the hold/audit database server 260. The site manager hold/audit/edi/server 245 is preferably adapted to interface with the hold/audit database 265 using the ODBC (Open DataBase Connectivity) programming interface. As will be recognized by persons having ordinary skill in the art, ODBC refers to a conventional database programming interface available from Microsoft that provides a common language for Windows applications to access databases on a network. In a preferred embodiment, the site manager hold/audit/edi server 245 is adapted to permit the hold/audit/edi client 210 to view transactions in the system 200 using the X-12 industry-standard electronic data interchange communication standard.

In a preferred embodiment, the hold/audit/edi server 245 includes hardware having dual Intel Pentium/DEC Alpha Processors 300+ MHZ, and software having Windows NT 4.0 with Service Pack #4, Microsoft IIS 4.0 Web Server (Option Pack #4), Seagate Crystal Reports 7.0 Professional, and RDMS Client (Oracle for Windows NT or SQL Server Client).

The hold/audit interface 250 is preferably coupled to the site manager hold/audit/edi server 245, the hold/audit database server 260, the submitted

database server 270, and the hold/audit interface server 280. The hold/audit interface 250 is preferably adapted to interface with the hold/audit database 265 via the hold/audit database server 260 and the submitted database 275 via the submitted database server 270. In a preferred embodiment, the hold/audit interface 250 is adapted to interface with the hold/audit database 265 and the submitted database 275 using the OLEDB (OLE DataBase) programming interface. As will be recognized by persons having ordinary skill in the art, OLEDB is a programming interface for data access available from Microsoft. In several alternative embodiments, the hold/audit interface install 250 and the hold/audit interface database server 280 are combined on either side of the firewall 255.

The firewall 255 is preferably coupled between the web server 240, the site manager hold/audit/edi server 245, the hold/audit interface 250 and the hold/audit database server 260, the submitted database server 270, and the hold/audit interface database server 280.

The hold/audit database server 260 is preferably coupled to the web server 240, the site manager hold/audit/edi server 245, the hold/audit interface 250, the hold/audit database 265, and the hold/audit interface database server 280.

In a preferred embodiment, the hold/audit database server 260 includes: a Microsoft SQL Server 6.5 with Service Pack #5 on NT 4.0 Server with Service Pack #4, and/or an Oracle 7.3.4 Server on NT 4.0 Server with Service Pack #4 or UNIX Server.

The hold/audit database 265 is coupled to the hold/audit database server 260. The hold/audit database 265 is preferably adapted to hold data files that include: (1) intermediate saved data and (2) submitted data. In a preferred embodiment, the hold/audit database 265 is provided in compliance with GISB standard 1.3.

The submitted database server 270 is preferably coupled to the web server 240, the hold/audit interface 250, the submitted database 275, and the hold/audit interface database server 280.

In a preferred embodiment, the submitted database server 270 includes: a Microsoft SQL Server 6.5 with Service Pack #5 on NT 4.0 Server with Service Pack #4, and/or an Oracle 7.3.4 Server on NT 4.0 Server with Service Pack #4 or UNIX Server.

The submitted database 275 is coupled to the submitted database server 270. The submitted database 275 is preferably adapted to hold data files that include: (1) intermediate saved data and (2) submitted data. In a preferred embodiment, the submitted database 275 is provided in compliance with GISB standard 1.3.

The hold/audit interface database server 280 is coupled to the hold/audit interface 250, the hold/audit database server 260, and the submitted database server 270. The hold/audit interface database server 280 is preferably adapted to interface with the hold/audit database 265 via the hold/audit database server 260 and the submitted database 275 via the submitted database server 270. In a preferred embodiment, the hold/audit interface database server 280 is adapted to interface with the hold/audit database 265 and the submitted database 275 using the OLEDB (OLE DataBase) programming interface. As will be recognized by persons having ordinary skill in the art, OLEDB is a programming interface for data access available from Microsoft.

In a preferred embodiment, the hold/audit interface database server 280 includes: a Microsoft SQL Server 6.5 with Service Pack #5 on NT 4.0 Server with Service Pack #4, and/or an Oracle 7.3.4 Server on NT 4.0 Server with Service Pack #4 or UNIX Server.

Referring to FIG. 3, in a preferred embodiment, during operation of the system 200, system data is classified as either: (1) screen entry data; (2) interim saved data; or (3) submitted data. Screen entry data includes data that exists within the thin client 205. Interim saved data 310 includes screen data that has been saved by the thin client 205, or automatically saved by the system 200, prior to actual submission for processing by the system 200. Submitted data 315 includes date submitted by the thin client 205 for actual processing by the system 200. In a preferred embodiment, all interim saved data 310 is saved

within the hold/audit database 265. In a preferred embodiment, all submitted data is saved within both the hold/audit database 265 and the submitted database 275. In this manner, the hold/audit database 265 provides both: (1) a temporary hold file for interim saved data 310; and (2) an audit file for verification of transactions by thin clients 205 using the system 200. More generally, in several alternative embodiments, the system 200 includes an N-tiered database structure, where N is greater than or equal to 2. In this manner, the database is optimally distributed and maintained.

Referring to FIG. 4, during operation of the system 200, the thin client 205 preferably interacts with the system 200 using a process 400 for processing data that includes the steps of: entering, editing, and/or viewing screen data in step 405; selecting an interim save of the screen data in step 410; selecting to submit the screen data in step 415; saving the screen data to the hold/audit database in step 420; and saving the screen data to the hold/audit database and the submitted database in step 425.

In a preferred embodiment, in step 405, the thin client 205 is permitted to enter, edit, and/or view data. In a preferred embodiment, in step 405, the thin client 405 may enter new data into one or more blank screen data entry locations and/or retrieve previously saved interim or submitted data for further editing.

In a preferred embodiment, the thin client 205 may then elect to interim save the screen data in step 410 or to submit the screen data for processing by the system 200 in step 415. Alternatively, the system 200 may automatically save screen data as interim data on a predetermined basis. If the screen data is interim saved in step 410, then the system 420 saves the interim data in the hold/audit database 265. If the screen data is submitted in step 415, then the system saves the submitted data into both the hold/audit database 265 and the submitted database 275 in step 425.

Referring to FIGS. 5 and 5a, in a preferred embodiment, during operation of the system 200, the system 200 implements a process 500 for managing the scheduling and delivery of natural gas products that includes the

steps of: logging into the system 200 in step 502; selecting nomination options in step 504; maintaining nominations in step 506; reviewing nominations in step 508; generating nomination status reports in step 510; viewing nomination activity in step 512; selecting confirmation options in step 514; maintaining confirmations in step 516; generating confirmation status reports in step 518; selecting predetermined allocation options in step 520; maintaining predetermined allocations in step 522; generating predetermined allocation status reports in step 524; selecting report options in step 526; generating customer reports in step 528; generating partner reports in step 530; generating contract reports in step 532; selecting capacity release options in step 534; viewing offers, bids or awards in step 536; view system wide notices in step 538; view operationally available and unsubscribed capacity in step 540; and select administration options in step 542. In several alternative embodiments, the process 500 is preferably adapted to manage the scheduling and delivery of other products, such as, for example, durable goods, perishable goods, and commodities.

In a preferred embodiment, as illustrated in FIGS. 6a, 6b and 6c, in step 502, the thin client 205 logs into the system 200 using a login process 502 that includes the steps of: accessing the system website in step 602; checking for a user identification cookie in step 604; displaying a blank in the user identification field in step 606; entering the user identification in step 608; entering the user password in step 612; checking the entered user identification and password for validity in step 614; display error message in step 616; checking for a user defaults cookie in step 618; using the user defaults in step 620; and continuing in step 622. As will be recognized by persons having ordinary skill in the art, having the benefit of the present disclosure, the term cookie refers to data that is created by a conventional Web server that is stored on a user's computer.

In a preferred embodiment, in step 602, the thin client 205 accesses the system website. In a preferred embodiment, the system website is maintained and operated by the provider 110.

In a preferred embodiment, in step 604, the system 200 checks for a user cookie that includes the user identification for the thin client 205.

In a preferred embodiment, if a user identification cookie is not found, then in step 606, the user identification field is blank. The thin client 205 then enters the user identification in step 608.

In a preferred embodiment, is a user identification cookie is found, then in step 610, the user identification is entered into the user identification field.

In a preferred embodiment, in step 612, the thin client 205 enters a password.

In a preferred embodiment, in step 614, the user identification and user password are checked for validity. If the user identification and/or user password are invalid, then an error message is displayed on the thin client in step 616.

In a preferred embodiment, in step 618, the system 200 checks for user default cookies. In a preferred embodiment, the user default cookies include default values for system variables such as, for example, the pipeline and/or the contract and/or the gas day.

If user default cookie data is found then the found user default data is used by the system 200 in step 620. The system 200 then continues in step 622 and prompts the thin client 205 to select one of the following: options for nominations in step 504; options for confirmations in step 514; options for predetermined allocations in step 520; options for reports in step 526; options for capacity release in step 534; and options for administration in step 542.

In a preferred embodiment, in step 504, the thin client 205 selects from among the nomination options of: maintaining nominations in step 506; reviewing nominations in step 508; viewing the status of nominations in step 510; and viewing nomination activity in step 512. The thin client 205, in step 504, can further preferably switch to any one of the following: confirmation options in step 514; predetermined allocation options in step 520; report options in step 526; capacity release options in step 534; administration options in step 542; and exiting the system 200.

In a preferred embodiment, as illustrated in FIGS. 7a and 7b, maintaining nominations in step 506 includes the steps of: begin maintaining nominations in step 705; entering nomination data in step 710; retrieving corresponding nomination data in step 715; optionally selecting interim saving of nomination data in step 720; interim saving nomination data in step 725; optionally selecting submitting nomination data in step 730; saving submitted nomination data in step 735; optionally continuing to maintain nominations in step 740; and returning to the nomination options step 504 in step 745. In a preferred embodiment, maintaining options in step 506 permits a thin client 205 to enter new nominations and/or edit previously interim saved or submitted nominations.

In a preferred embodiment, in step 710, the thin client 205 may add and/or edit nomination data that includes one or more of the following: the pipeline, the contract, the start date, the end date, the contract type, the service level, the model type, the nomination unit (Nom Unit), the balance table information, the path information, the receipt information, and the delivery information.

In a preferred embodiment, the balance table information includes one or more of the following: the path, points, and difference (DIFF) for the receipt total (REC TOTAL), the fuel, and the delivery total (DEL TOTAL).

In a preferred embodiment, the path information includes one or more of the following: the tracking number (TRACK NO), the transaction type (TRANS TYPE), the cycle number, the receipt meter (REC METER), the delivery meter (DEL METER), the package ID, the receipt rank, the receipt volume, the fuel percent, the delivery rank, and the delivery volume.

In a preferred embodiment, the receipt information includes one or more of the following: the path total, the point total, the difference, the tracking number (TRACK NO), the transaction type (TRANS TYPE), the cycle number, the receipt meter (REC METER), the package ID, the upstream contract (UP CONTRACT), the upstream entity (UP ENTITY), the rank, and the volume.

In a preferred embodiment, the delivery information includes one or more of the following: the path total, the point total, the difference, the tracking number (TRACK NO), the transaction type (TRANS TYPE), the cycle number, the delivery meter (DEL METER), the package ID, the downstream contract (DOWN CONTRACT), the downstream entity (DOWN ENTITY), the rank, and the volume.

In a preferred embodiment, the thin client 205 may further change and/or select the cycle. In a preferred embodiment, upon selecting the CHANGE CYCLE option, as illustrated in FIG. 7c, the thin client 205 may select from a plurality of cycles. In a preferred embodiment, a cycle grid display provides the thin client 205 with the following information for each cycle: (1) the cycle number; (2) the cycle name; (3) the cycle status; and (4) the cycle description.

In a preferred embodiment, in step 715, one of more of the nomination data entries are automatically provided and displayed by the system 200 on the thin client 205 as a function of default values for the thin client 205, and/or any combination of the nomination data entries entered by the thin client 205. In this manner, the system 200 facilitates the entry and processing of the nomination data. In a preferred embodiment, the system 200 further displays a status message and information regarding selected cycle.

In a preferred embodiment, in step 720, the thin client 205 can interim save the nomination data. In a preferred embodiment, the thin client 205 can elect to interim save the nomination data by selecting an interim save of the nomination data. Alternatively, the system 200 automatically interim saves the nomination data based upon a user defined default timing or other incremental value.

If the thin client chooses to interim save the nomination data, then the nomination data is preferably saved in the hold/audit database 265 in step 725.

In step 730, the thin client 205 may then preferably choose to submit the nomination data for processing by the system 200. Nomination data that is

submitted for processing by the system may then be modified, confirmed or rejected by a thin client 205.

If the thin client 205 submits the nomination data for processing by the system 200, then the nomination data is preferably saved in the hold/audit database 265 and the submitted database 275 in step 735.

In step 740, the thin client 205 preferably may choose to continue entering nomination data in step 710 or return 745 to the nomination options in step 504.

As illustrated in FIGS. 8a and 8b, in a preferred embodiment, reviewing nominations in step 508 preferably includes the steps of: entering nomination filter data in step 805; retrieving corresponding nomination data in step 810; optionally continuing in step 815; and returning in step 820.

In a preferred embodiment, in step 805, the thin client 205 enters one or more nomination filter data in order to select corresponding nomination data for display. In a preferred embodiment, the nomination filter data includes the pipeline, the contract, the start date, the receipt meter filter (REC METER), and/or the delivery meter filter (DEL METER).

In a preferred embodiment, in step 810, the system 200 retrieves and displays the nomination data on the thin client 205 corresponding to the nomination filter data entered in step 805. In a preferred embodiment, the nomination data includes one or more of the following: the contract type; the service level; the model type; the nomination unit (Nom Unit); the balance table; the path information; the receipt information; the delivery information; and the nomination status calender.

In a preferred embodiment, the balance table information includes: the PATH, POINTS, and DIFF for each of the receipt total (REC TOTAL); the fuel; and the delivery total (DEL TOTAL).

In a preferred embodiment, the path information includes one or more of the following: the tracking number (TRACK NO), the transaction type (TRANS TYPE), the receipt meter (REC METER), the delivery meter (DEL METER),

the package ID, the receipt rank and volume; the fuel percent; and the delivery rank and volume.

In a preferred embodiment, the receipt information includes one or more of the following: the path total; the point total; the difference; the tracking number (TRACK NO), the transaction type (TRANS TYPE), the receipt meter (REC METER), the package ID, the upstream contract (UP CONTRACT), the upstream entity (UP ENTITY), the rank, and the volume.

In a preferred embodiment, the delivery information includes one or more of the following: the path total; the point total; the difference; the tracking number (TRACK NO), the transaction type (TRANS TYPE), the delivery meter (DEL METER), the package ID, the downstream contract (DOWN CONTRACT), the downstream entity (DOWN ENTITY), the rank, and the volume.

In a preferred embodiment, the nomination status calender information includes receipt volume information and delivery volume information for the selected time period. In a preferred embodiment, the receipt volume information includes one or more of the following: the status; the rank; and the volume for each day within the selected time period; and the volume total for the selected time period. In a preferred embodiment, the delivery volume information includes one or more of the following: the status; the rank; and the volume for each day within the selected time period; and the volume total for the selected time period.

In a preferred embodiment, the thin client 205 may then choose to continue entering nomination filter information in step 815. If the thin client 205 chooses to discontinue entering nomination filter data, then the system 200 returns in step 820 to the nomination options in step 504.

In a preferred embodiment, as illustrated in FIGS. 9a and 9b, viewing the status of nominations in step 510 includes the steps of: entering nomination filter data in step 905; retrieving corresponding nomination status information in step 910; optionally continuing in step 915; and returning in step 920.

In a preferred embodiment, in step 905, the thin client 205 enters one or more nomination filter data in order to select corresponding nomination data for display. In a preferred embodiment, the nomination filter data includes the pipeline, the contract, and/or the nomination submission date.

In a preferred embodiment, in step 910, the system 200 retrieves and displays the nomination status information on the thin client 205 corresponding to the nomination filter data entered in step 905. In a preferred embodiment, the nomination status information includes the nomination status and/or the validation messages.

In a preferred embodiment, the nomination status information includes one or more of the following: the contract; the batch number; the time submitted; the time processed; and the status.

In a preferred embodiment, the validation messages includes one or more of the following: the nomination tracking number (NOM TRACKING NUMBER); the validation code; and the validation message.

In a preferred embodiment, the thin client 205 may then choose to continue entering nomination filter information in step 915. If the thin client 205 chooses to discontinue entering nomination filter data, then the system 200 returns in step 920 to the nomination options in step 504.

In a preferred embodiment, as illustrated in FIGS. 10a and 10b, viewing nomination activity in step 512 includes the steps of: entering nomination filter data in step 1005; retrieving corresponding nomination activity information in step 1010; optionally continuing in step 1015; and returning in step 1020.

In a preferred embodiment, in step 1005, the thin client 205 enters one or more nomination filter data in order to select corresponding nomination data for display on the thin client 205. In a preferred embodiment, the nomination filter data includes the pipeline, the contract, the meter, the gas day, and the point of view. In a preferred embodiment, the point of view may include the receipt point of view or the delivery point of view. In a preferred embodiment, the thin client 205 then presses the ACTIVITY button to retrieve the corresponding nomination activity information.

In a preferred embodiment, in step 1010, the system 200 retrieves and displays the nomination activity information on the thin client 205 corresponding to the nomination filter data entered in step 1005. In a preferred embodiment, the nomination activity information includes one or more of the following: the gas day (DAY); the amount nominated (NOMINATED); the amount scheduled (SCHEDULED); the amount confirmed (CONFIRMED); the maximum available capacity (BEST AVAILABLE); and totals for each category.

In a preferred embodiment, the thin client 205 may then choose to continue entering nomination filter information in step 1015. If the thin client 205 chooses to discontinue entering nomination filter data, then the system 200 returns in step 1020 to the nomination options in step 504.

In a preferred embodiment, in step 514, the thin client 205 selects from among the confirmation options of: maintaining confirmations in step 516; and viewing the status of confirmations in step 518. The thin client 205 preferably may also switch to any one of the following: nomination options in step 504; predetermined allocation options in step 520; report options in step 526; capacity release options in step 534; administration options in step 542; and exiting the system 200.

As illustrated in FIGS. 11a, 11b and 11c, in a preferred embodiment, maintaining confirmations 516 includes the steps of: entering confirmation filter data in step 1110; retrieving corresponding data in step 1115; optionally confirming the retrieved corresponding data in step 1120; entering confirmation information for the retrieved corresponding data in step 1125; optionally selecting interim saving of the confirmation data in step 1130; interim saving the confirmation data in step 1135; optionally selecting submitting the confirmation data in step 1140; saving the submitted confirmation data in step 1145; optionally continuing to maintain confirmations in step 1150; and returning to the confirmation options step 514 in step 1155. In a preferred embodiment, maintaining confirmations in step 516 permits a thin client 205 to enter new confirmations and/or edit previously interim saved or submitted confirmations.

In a preferred embodiment, in step 1110, the thin client 205 enters confirmation filter information includes one or more of the following: the pipeline, the start date, and/or the end date. In several alternative embodiments, the confirmation filter data further includes one or more of the following: the contract, the contract type, the service level, the model type, the nomination unit, the balance table information, the path information, the receipt information, and the delivery information.

In a preferred embodiment, the thin client 205 may further change and/or select the cycle as described above with reference to FIG. 7c.

In a preferred embodiment, in step 1115, data corresponding to the confirmation filter data is retrieved and displayed by the system 200 on the thin client 205. In several alternative embodiments, the retrieved data corresponds to submitted nominations, submitted predetermined allocations, submitted confirmations, submitted capacity release offers, submitted capacity release bids, and/or submitted capacity release awards. In this manner, the thin client 205 may respond to data submitted to the system 200 for processing.

In a preferred embodiment, the retrieved data includes one or more of the following information: cycles information; meters information; and confirmation requests.

In a preferred embodiment, the cycles information includes one or more of the following: the cycle number; the cycle name; the cycle status; and the cycle description.

In a preferred embodiment, the meters information includes one or more of the following: operator confirmations indicator; operator confirmations for cycle indicator; cycle change indicator; CBE out of range indicator; the meter number (METER); the meter description; the direction of flow (DIR OF FLOW); the received volume (REC VOL); the delivered volume (DEL VOL); the total volume (TOTAL VOL); the CBE; the upper volume limit (HIGH LIMIT); and the lower volume limit (LOW LIMIT).

In a preferred embodiment, the confirmation requests information includes one or more of the following: the DOF; the shipper, the contract; the

US/DS ENTITY; the US/DS; the package ID (PKG ID); the FLOWED; the PREV; the nominated volume (NOM VOL); the CUT TO; the CONF; the REAS; the cycle; the ASSIGN; and the SRC.

In a preferred embodiment, the system 200 further displays one or more status messages corresponding to the confirmation filter data. Alternatively, the system 200 further displays system wide notices.

In a preferred embodiment, in step 1120, the thin client 205 can elect to confirm the retrieved confirmation requests.

If the thin client 205 elects to confirm the retrieved confirmation requests in step 1120, then the thin client 205 can then enter confirmation information for the retrieved confirmation requests in step 1125. In several alternative preferred embodiments, the thin client 205 can enter confirmation information for operator confirmations, or operator confirmations for cycle. In a preferred embodiment, the confirmation information can include one or more of the following: a validation of the retrieved confirmation requests; an approval of the retrieved confirmation requests; a disapproval of the retrieved confirmation requests; and/or feedback comments regarding the retrieved confirmation requests.

In a preferred embodiment, in step 1130, the thin client 205 can interim save the confirmation data. In a preferred embodiment, the confirmation data includes the retrieved corresponding data and the confirmation information. In a preferred embodiment, the thin client 205 can elect to interim save the confirmation data by selecting an interim save of the confirmation data. Alternatively, the system 200 automatically interim saves the confirmation data based upon a user defined default timing or other incremental value.

If the thin client chooses to interim save the confirmation data, then the confirmation data is preferably saved in the hold/audit database 265 in step 1135.

In step 1140, the thin client 205 may then preferably choose to submit the confirmation data for processing by the system 200. Confirmation data that is submitted for processing by the system may then be modified, confirmed, or

rejected by a thin client 205. In a preferred embodiment, the thin client 205 may automatically confirm some or all of the outstanding confirmation requests by selecting Auto Confirm.

If the thin client 205 submits the confirmation data for processing by the system 200, then the confirmation data is preferably saved in the hold/audit database 265 and the submitted database 275 in step 1145.

In step 1150, the thin client 205 preferably may choose to continue entering confirmation filter data in step 1110 or return 1155 to the confirmation options in step 514.

In a preferred embodiment, as illustrated in FIGS. 12a and 12b, viewing the status of confirmations in step 518 includes the steps of: entering confirmation status filter data in step 1205; retrieving the corresponding confirmation status information in step 1210; optionally continuing in step 1215; and returning in step 1220.

In a preferred embodiment, in step 1205, the thin client 205 enters one or more confirmation filter data in order to select corresponding confirmation data for display. In a preferred embodiment, the nomination filter data includes the pipeline, the confirmation submission date (SUBMIT DATE); and a status selection (STATUS).

In a preferred embodiment, in step 1210, the system 200 retrieves and displays the confirmation status information on the thin client 205 corresponding to the confirmation filter data entered in step 1205. In a preferred embodiment, the confirmation status information includes a status message; the quick responses; and the quick response batch # details.

In a preferred embodiment, the status message corresponds to the confirmation filter information. Alternatively, the status message is a system wide notice.

In a preferred embodiment, the quick response information includes one or more of the following: the batch number (BATCH #); the confirming requestor; the confirming party; the time submitted; and the status.

In a preferred embodiment, the quick response batch # details includes one or more of the following: the confirmation tracking number (TRACKING #); the validation code; the validation message; and the last update date for a selected quick response batch number.

In a preferred embodiment, the thin client 205 may then choose to continue entering confirmation status filter information in step 1215. If the thin client 205 chooses to discontinue entering confirmation status filter data, then the system 200 returns in step 1220 to the confirmation options in step 514.

In a preferred embodiment, in step 520, the thin client 205 selects from among the predetermined allocation (PDA) options of: maintaining predetermined allocations in step 522; and viewing the status of predetermined allocations in step 524. The thin client 205 preferably may also switch to any one of the following: nomination options in step 504; confirmation options in step 514; report options in step 526; capacity release options in step 534; administration options in step 542; and exiting the system 200.

As illustrated in FIGS. 13a and 13b, in a preferred embodiment, maintaining predetermined allocations (PDA) in step 522 includes: begin maintaining PDAs in step 1305; entering PDA data in step 1310; retrieving corresponding PDA data in step 1315; optionally selecting interim saving of PDA data in step 1320; interim saving PDA data in step 1325; optionally selecting submitting PDA data in step 1330; saving submitted PDA data in step 1335; optionally continuing to maintain PDAs in step 1340; and returning to the PDA options step 520 in step 1345. In a preferred embodiment, maintaining PDAs in step 520 permits a thin client 205 to enter new PDAs and/or edit previously interim saved or submitted PDAs.

In a preferred embodiment, in step 1310, the thin client 205 may add and/or edit PDA data that includes one or more of the following: the pipeline, the start date, the end date, the meter; the meter description; the direction of flow; the allocation tier selection; the delivery meter (DEL METER); the pipeline; the volume; the high/low rank filter selection; the DS (downstream)

entity; the volume; the method; the rank level; the limit value; and the high/low status.

In a preferred embodiment, in step 1315, one of more of the PDA data entries are automatically provided and displayed by the system 200 on the thin client 205 as a function of default values for the thin client 205, and/or any combination of the PDA data entries entered by the thin client 205. In this manner, the system 200 facilitates the entry and processing of the PDA data.

In a preferred embodiment, in step 1320, the thin client 205 can interim save the PDA data. In a preferred embodiment, the thin client 205 can elect to interim save the PDA data by selecting an interim save of the PDA data. Alternatively, the system 200 automatically interim saves the nomination data based upon a user defined default timing or other incremental value.

If the thin client chooses to interim save the PDA data, then the PDA data is preferably saved in the hold/audit database 265 in step 1325.

In step 1330, the thin client 205 may then preferably choose to submit the PDA data for processing by the system 200. PDA data that is submitted for processing by the system may then be modified, confirmed or rejected by a thin client 205.

If the thin client 205 submits the PDA data for processing by the system 200, then the PDA data is preferably saved in the hold/audit database 265 and the submitted database 275 in step 1335.

In step 1340, the thin client 205 preferably may choose to continue entering/editing PDA data in step 1310 or return 1345 to the PDA options in step 520.

In a preferred embodiment, as illustrated in FIGS. 14a and 14b, viewing the status of PDAs in step 524 includes the steps of: entering PDA filter data in step 1405; retrieving corresponding PDA status information in step 1410; optionally continuing in step 1415; and returning in step 1420.

In a preferred embodiment, in step 1405, the thin client 205 enters one or more PDA filter data in order to select corresponding PDA status data for display. In a preferred embodiment, the PDA status filter data includes one or

more of the following: the pipeline, the PDA submission date (Submit Date), and the PDA status option (PDA Status).

In a preferred embodiment, in step 1410, the system 200 retrieves and displays the PDA status information on the thin client 205 corresponding to the PDA status filter data entered in step 1405. In a preferred embodiment, the PDA status information includes the PDA status and/or the PDA validation messages.

In a preferred embodiment, the PDA status information includes one or more of the following: the PDA number (NO.); the statement date; the time processed; and the status.

In a preferred embodiment, the validation messages includes one or more of the following: the validation code; and the validation message.

In a preferred embodiment, the thin client 205 may then choose to continue entering PDA status filter information in step 1415. If the thin client 205 chooses to discontinue entering PDA status filter data, then the system 200 returns in step 1420 to the PDA options in step 520.

In a preferred embodiment, in step 526, the thin client 205 selects from among the report options of: customer reports in step 528; partner reports in step 530; and contract reports in step 532. The thin client 205 preferably may also switch to any one of the following: nomination options in step 504; confirmation options in step 514; predetermined allocation options in step 520; capacity release options in step 534; administration options in step 542; and exiting the system 200. In an exemplary embodiment, the screen display for step 526 is illustrated in FIG. 15.

As illustrated in FIGS. 15a and 15b, in a preferred embodiment, the customer reports option 528 includes the steps of: entering customer report filter data in step 1505; retrieving corresponding customer report information in step 1510; optionally continuing in step 1515; and returning in step 1520.

In a preferred embodiment, in step 1505, the thin client 205 enters one or more customer report filter data in order to select corresponding customer data for display. In a preferred embodiment, the customer report filter data

includes the company name, company code, customer number and/or the company telephone number.

In a preferred embodiment, in step 1510, the system 200 retrieves and displays the customer information on the thin client 205 corresponding to the customer filter data entered in step 1505. In a preferred embodiment, the customer information includes the company name, company code, customer number and/or the company telephone number.

In a preferred embodiment, the thin client 205 may then choose to continue entering customer filter information in step 1515. If the thin client 205 chooses to discontinue entering customer filter data, then the system 200 returns in step 1520 to the report options in step 526.

As illustrated in FIGS. 16a and 16b, in a preferred embodiment, the partner reports option 530 includes the steps of: entering partner report filter data in step 1605; retrieving corresponding partner report information in step 1610; optionally continuing in step 1615; and returning in step 1620.

In a preferred embodiment, in step 1605, the thin client 205 enters one or more partner report filter data in order to select corresponding partner data for display. In a preferred embodiment, the partner report filter data includes the pipeline.

In a preferred embodiment, in step 1610, the system 200 retrieves and displays the partner information on the thin client 205 corresponding to the partner filter data entered in step 1605. In a preferred embodiment, the partner information includes the company identification code (COMPANY ID), the company name, the Duns Number, the company phone, meter information and/or contract dates.

In a preferred embodiment, the thin client 205 may then choose to continue entering partner filter information in step 1615. If the thin client 205 chooses to discontinue entering partner filter data, then the system 200 returns in step 1620 to the report options in step 526.

As illustrated in FIGS. 17a and 17b, in a preferred embodiment, the contracts reports option 532 includes the steps of: entering contract report

filter data in step 1705; retrieving corresponding contract report information in step 1710; optionally continuing in step 1715; and returning in step 1720.

In a preferred embodiment, in step 1705, the thin client 205 enters one or more contract report filter data in order to select corresponding contract data for display. In a preferred embodiment, the contract report filter data includes the pipeline, and/or the date.

In a preferred embodiment, in step 1710, the system 200 retrieves and displays the contract information on the thin client 205 corresponding to the contract filter data entered in step 1705. In a preferred embodiment, the contract information includes one or more of the following: the contracts available, the contract dates, and the points.

In a preferred embodiment, the contracts available information includes one or more of the following: the contract number (CONTRACT); the shipper; the agent; the contract type; the service level; and the GISB model type.

In a preferred embodiment, the contracts date information includes one or more of the following: the request date; the agreement date; the termination date; and the balance date.

In a preferred embodiment, the points information includes one or more of the following: the receiving meter number (REC METER); the delivery meter number (DEL METER); the point of view; the rate unit; the priority; and the maximum quantity (MAX QUANTITY).

In a preferred embodiment, the thin client 205 may then choose to continue entering contract filter information in step 1715. If the thin client 205 chooses to discontinue entering contract filter data, then the system 200 returns in step 1720 to the report options in step 526.

In a preferred embodiment, in step 534, the thin client 205 selects from among the capacity release options of: offer, bids and awards in step 536; system wide notices in step 538; and operationally available and unsubscribed capacity (OAUC) in step 540. The thin client 205 preferably may also switch to any one of the following: nomination options in step 504; confirmation options

in step 514; predetermined allocation options in step 520; report options 526; administration options in step 542; and exiting the system 200.

In a preferred embodiment, as illustrated in FIGS. 18a and 18b, maintaining capacity release offers, bid & awards in step 536 includes the steps of: begin maintaining capacity release offers, bids & awards in step 1805; entering capacity release offers, bids & awards data in step 1810; retrieving corresponding capacity release offers, bids & awards data in step 1815; optionally selecting interim saving of capacity release offers, bids & awards data in step 1820; interim saving capacity release offers, bids & awards data in step 1825; optionally selecting submitting capacity release offers, bids & awards data in step 1830; saving submitted capacity release offers, bids & awards data in step 1835; optionally continuing to maintain capacity release offers, bids & awards in step 1840; and returning to the capacity release options step 534 in step 1845. In a preferred embodiment, maintaining capacity release offers, bids & awards in step 536 permits a thin client 205 to enter new capacity release offers, bids & awards and/or edit previously interim saved or submitted capacity release offers, bids & awards.

In a preferred embodiment, in step 1810, the thin client 205 may enter and/or edit capacity release offers, bids & awards data that includes one or more of the following: the point of view (offers, bids or awards); the transportation service provider (Transportation Svc Provider); the capacity releasing company (Rel Company); the replacement/bidder company; the offer number (Offer No.), bid (Bid No.), or award number (Award No.); the offer, bid, or award recipient (To); the capacity release term start date (Rel Term Start Date); the capacity release term end date (Rel Term End Date); the bid period start date (Bid Period Start D/T); the bid period end date (Bid Period End D/T); the capacity release contract number (Rel K No.); the prearranged deal indicator (Prearranged Deal Ind); and the status. In a preferred embodiment, the thin client 205 may retrieve previously interim saved or submitted offers, bids and awards and/or create new offers, bids, and awards and/or submit offers, bids and awards.

In a preferred embodiment, in step 1815, one of more of the capacity release offers, bids & awards data entries are automatically provided and displayed by the system 200 on the thin client 205 as a function of default values for the thin client 205, and/or any combination of the capacity release offers, bids & awards data entries entered by the thin client 205. In this manner, the system 200 facilitates the entry and processing of the capacity release offers, bids & awards data.

In a preferred embodiment, capacity release offers, bids & award information includes at least one or more of the following: the offer number (Offer No); the number of bids for the offer (No of Bids); the UPPD number; the capacity releasing company (Rel Company); the capacity releasing contract (Rel K No); the starting date for bids (Bid Period Start D/T); the ending date for bids (Bid Period End D/T); start date of the capacity release (Rel Term Start Date); the ending date of the capacity release (Rel Term End Date); and the status.

In a preferred embodiment, in step 1820, the thin client 205 can interim save the capacity release offers, bids & awards data. In a preferred embodiment, the thin client 205 can elect to interim save the capacity release offers, bids & awards data by selecting an interim save of the capacity release offers, bids & awards data. Alternatively, the system 200 automatically interim saves the capacity release, offers, bids & awards data based upon a user defined default timing or other incremental value.

If the thin client chooses to interim save the capacity release offers, bids & awards data, then the capacity release offers, bids & awards data is preferably saved in the hold/audit database 265 in step 1825.

In step 1830, the thin client 205 may then preferably choose to submit the capacity release offers, bids & awards data for processing by the system 200. Capacity release offers, bids & awards data that is submitted for processing by the system 200 preferably may then be modified, confirmed or rejected by a thin client 205.

If the thin client 205 submits the capacity release offers, bids & awards data for processing by the system 200, then the capacity release offers, bids & awards data is preferably saved in the hold/audit database 265 and the submitted database 275 in step 1835.

In step 1840, the thin client 205 preferably may choose to continue entering capacity release offers, bids & awards data in step 1810 or return 1845 to the capacity release options in step 534.

As illustrated in FIGS. 19a, 19b, 19c and 19d, in a preferred embodiment, viewing and posting system wide notices in step 538 includes the steps of: optionally viewing system wide notices in step 1905; entering system wide notice filter information in step 1910; retrieving corresponding system wide notices in step 1915; optionally continuing to view system wide notices in step 1920; optionally entering/editing system wide notices in step 1925; entering system wide notice data in step 1930; retrieving corresponding system wide notice data in step 1935; optionally interim saving system wide notice data in step 1940; interim saving system wide notice data in the hold/audit database 265 in step 1945; optionally submitting the system wide notice data in step 1950; saving the system wide notice data in step 1955; optionally continuing to enter/edit system wide notices in step 1960; optionally continuing to view and edit system wide notices in step 1965; and returning to the capacity release options in step 1970. In a preferred embodiment, viewing and posting system wide notices in step 538 permits the thin client 205 to view, enter, edit, interim save, and submit system wide notices. In a preferred embodiment, system wide notices can only be created/edited by the administrator of the system 200.

In a preferred embodiment, in step 1905, the thin client 205 can elect to view system wide notices.

In a preferred embodiment, in step 1910, the thin client 205 enters one or more system wide notice filter data in order to select corresponding system wide notices for display. In a preferred embodiment, the system wide notice filter data includes one or more of the following: the transportation service provider (transportation Svc Provider); the notice type; notice status; the range

of notice IDs; the critical notice code (Critical Notice); the notice effective date (Notice Eff Date); the notice end date; and the posting date.

In a preferred embodiment, in step 1915, the system 200 retrieves and displays the corresponding system wide notices on the thin client 205 corresponding to the system wide notice filter data entered in step 1910. In a preferred embodiment, the system wide notice information includes one or more of the following: the notice ID; the notice type; the critical notice indicator (Critical Notice Ind); the notice status; the notice effective date (notice Eff D/T); the notice end date; and the notice posting date.

In a preferred embodiment, the thin client 205 may then choose to continue entering system wide notice filter information in step 1920. If the thin client 205 chooses to discontinue entering system wide notice filter data, then the thin client 205 may elect to optionally enter/edit system wide notices in step 1925.

In a preferred embodiment, in step 1930, the thin client 205 may enter and/or edit system wide notices include one or more of the following: the notice ID; the notice type; the critical notice indicator; the notice status, the notice effective data, the notice end date; and the notice posting date. In a preferred embodiment, the thin client 205 may retrieve previously interim saved or submitted system wide notices and/or create new system wide notices.

In a preferred embodiment, in step 1935, one of more of the system wide notices are automatically provided and displayed by the system 200 on the thin client 205 as a function of default values for the thin client 205, and/or any combination of the system wide notice entries entered by the thin client 205. In this manner, the system 200 facilitates the entry and processing of the system wide notices.

In a preferred embodiment, in step 1940, the thin client 205 can interim save the system wide notice data. Alternatively, the system 200 automatically interim saves the system wide notice data based upon a user defined default timing or other incremental value.

If the thin client 205 chooses to interim save the system wide notice data, then the system wide notice data is preferably saved in the hold/audit database 265 in step 1945.

In step 1950, the thin client 205 may then preferably choose to submit the system wide notice data for processing by the system 200. System wide notice data that is submitted for processing by the system 200 preferably may then be modified, confirmed or rejected by a thin client 205.

If the thin client 205 submits the system wide notice data for processing by the system 200, then the system wide notice data is preferably saved in the hold/audit database 265 and the submitted database 275 in step 1955.

In step 1960, the thin client 205 preferably may choose to continue entering system wide notices in step 1930.

In step 1965, the thin client 205 preferably may choose to continue viewing and entering system wide notices or return in step 1970 to the capacity release options in step 534.

As illustrated in FIG. 19e, in a preferred embodiment, the thin client 205 can further view/enter detailed information for a system wide notice that includes one or more of the following: the transportation service provider (Transportation Svc Provider); the notice type; the critical notice indicator; the required response indicator (Required Response Ind); the notice ID; the prior notice ID; the notice status; the response date (Response D/T); the notice effective date (Notice Eff D/T); the notice end date (Notice End D/T); the posting date (Posting D/T); and the message. In a preferred embodiment, the thin client 205 may interim save or validate (submit) the system wide notice detailed information.

In a preferred embodiment, as illustrated in FIGS. 20a and 20b, viewing the operationally available and unsubscribed capacity (OAUC) data in step 540 includes the steps of: entering OAUC filter data in step 2005; retrieving corresponding OAUC information in step 2010; optionally continuing in step 2015; and returning in step 2020.

In a preferred embodiment, in step 2005, the thin client 205 enters one or more OAUC report filter data in order to select corresponding OAUC data for display. In a preferred embodiment, the OAUC report filter data includes the transportation service provider (Transportation Svc Provider); the location (Loc); the available capacity effective date (Avail Cap Eff D/T); the available capacity end date (Avail Cap End D/T); the posting date (Posting D/T); and the capacity type (Cap Type).

In a preferred embodiment, in step 2010, the system 200 retrieves and displays the OAUC information on the thin client 205 corresponding to the OAUC filter data entered in step 2005. In a preferred embodiment, the OAUC information includes one or more of the following: the OAUC path, and the OAUC details.

In a preferred embodiment, the OAUC path information includes one or more of the following: the transportation service provider (Transportation Svc Provider); the location (Loc); and the location description (Loc Desc).

In a preferred embodiment, the OAUC detailed information includes one or more of the following: the segment indicator (Segment Ind); the location capacity quantity (Loc Cap Qty); the quantity (Qty); the quantity available (Qty Avail); the IT indicator (IT Ind); the UOM; the available capacity effective date (Avail Cap Eff); the available capacity end date (Avail Cap End); the posting date (Posting D/T); and notes.

In a preferred embodiment, the thin client 205 may then choose to continue entering OAUC filter information in step 2015. If the thin client 205 chooses to discontinue entering contract filter data, then the system 200 returns in step 2020 to the capacity release options in step 534.

As illustrated in FIGS. 21a and 21b, the administration options in step 542 preferably include the steps of: select administration option in step 2105; user manager in step 2110; group manager in step 2115; menu manager in step 2120; application settings in step 2125; database verification in step 2130; server information is step 2135; online help in step 2140; and exit administration in step 2145. In a preferred embodiment, the administration

options in step 542 preferably permit the thin client 205 and/or the administrator of the system 200 to customize the various user attributes of the system 200 and process 500. In a preferred embodiment, the administrator of the system 200 in the only user authorized to access the administration options in step 542.

In a preferred embodiment, as illustrated in FIGS. 22a, 22b, and 22c, the user manager in step 2110 includes the steps of: selecting the user ID in step 2205; optionally electing the assign, modify or remove user access in step 2210; assigning, modifying or removing user access in step 2215; optionally electing to continue in step 2220; and returning in step 2225. In a preferred embodiment, the user manager in step 2110 permits the thin client 205 and/or the administrator of the system 200 to assign, modify, and remove user access to the system 200.

In a preferred embodiment, as illustrated in FIG. 22c, assigning, modifying or removing user access in step 2215 includes the ability to enter and/or edit user details that include one or more of the following: the user ID; the full name of the user; the telephone number of the user; the fax number of the user; the e-mail address of the user; the company that the user is associated with; the contact person at the company; the user group that the user is associated with; the expiration date of the user's access; the expiration date of the user's password; the date of the last login by the user; whether or not the user is active; notes regarding the user; the user's password; whether or not to change the user's password during the next user login; whether or not to lock the user's password; and whether or not the user is an internal user or an external user.

In a preferred embodiment, as illustrated in FIGS. 23a, 23b, and 23c, the group manager in step 2115 includes the steps of: selecting the group ID in step 2305; optionally electing the assign, modify or remove group access in step 2310; assigning, modifying or removing group access in step 2315; optionally electing to continue in step 2320; and returning in step 2325. In a preferred embodiment, the group manager in step 2115 permits the thin client 205 and/or

the administrator of the system 200 to assign, modify, and remove group access to the system 200.

In a preferred embodiment, as illustrated in FIG. 23b, the user groups include the administrator; operator; and shipper.

In a preferred embodiment, as illustrated in FIG. 23c, in step 2315, the thin client 205 or administrator of the system 200 may enter and/or edit the following: the user group name; the description of the user group; whether or not the user group is active; and designate a contact person for the user group.

In a preferred embodiment, as illustrated in FIGS. 24a, 24b, 24c, 24d, and 24e, the menu manager in step 2120 includes the steps of: optionally electing to add, edit, or remove menus or assign or remove menus for user groups in step 2405; optionally electing to add, edit, or remove menus in step 2410; adding, editing or removing menus in step 2415; optionally electing to continue in step 2420; optionally electing to assign or remove menus from user groups in step 2425; selecting a user group in step 2430; assigning or removing a menu from the selected user group in step 2435; optionally electing to continue in step 2440; and returning in step 2445. In a preferred embodiment, the menu manager in step 2120 permits the thin client 205 and/or the administrator of the system 200 to assign, modify, and remove menu items from the system 200.

In a preferred embodiment, as illustrated in FIG. 24b, in step 2405, the thin client 205 may elect to add, edit or remove menus or assign or remove menus for user groups.

In a preferred embodiment, as illustrated in FIG. 24c, in step 2415, the thin client 205 may add, edit or remove menu items by selecting one or more of the following for each menu item: adding a child; deleting; or moving the menu item.

In a preferred embodiment, as illustrated in FIGS. 24d and 24e, in steps 2430 and 2435, the thin client may assign or remove menu items for user groups including the administrator; the operator; or the shipper. In a preferred

embodiment, the thin client 205 may assign or remove menu items for user groups by granting or denying permission to use a selected menu item.

In a preferred embodiment, as illustrated in FIGS. 25a and 25b, the application settings in step 2125 includes the steps of: selecting the system settings to view in step 2505; optionally electing to continue in step 2520; and returning in step 2525. In a preferred embodiment, the application settings in step 2125 permits the thin client 205 and/or the administrator of the system 200 to view the application settings for the system 200.

In a preferred embodiment, as illustrated in FIG. 25b, the viewable system settings include the standard user settings and the system settings.

In a preferred embodiment, as illustrated in FIGS. 26a and 26b, the database verification in step 2130 includes the steps of: selecting a database and/or a database test in step 2605; optionally continuing in step 2620; and returning in step 2625. In a preferred embodiment, the database verification in step 2130 permits the thin client 205 and/or the administrator of the system 200 to verify the current database tables and database settings for the system 200.

In a preferred embodiment, as illustrated in FIG. 26b, in step 2605, the thin client 205 and/or the administrator of the system 200 can select one or more of the following conventional database tests: DUNS check, and PI data reference check.

In a preferred embodiment, as illustrated in FIGS. 27a, the server information provided in step 2135 includes one or more of the following: the drive; the type of drive; the volume name; the file system; the path; the available space; the total space; the current directory; and the script timeout. In a preferred embodiment, the user manager in step 2110 permits the thin client 205 and/or the administrator of the system 200 to view basic server statistics for the system 200.

In a preferred embodiment, as illustrated in FIGS. 28a, the online help in step 2140 provides online help for the system 200. In a preferred embodiment, the user manager in step 2110 permits the thin client 205 and/or the administrator of the system 200 to obtain online help for the system 200.

The following terms used within the present disclosure in describing the system 200 and the process 500 have the following general meanings:

The term activity generally refers to transactions exchanged between users of the system 200.

The term administrator generally refers to the administrator of the system 200.

The term agent generally refers to a party authorized by the contracting party to transact business on behalf of the contracting party.

The term allocation generally refers to the amount of delivered product allocated to corresponding recipient destinations.

The term allocation tier generally refers to the layer in allocation process where multiple layers of trading partners are involved in the allocation. Examples of allocation tiers include producer, operator, and end user. In this manner, multiple sources of products, multiple deliverers of products, and multiple recipients of products may be provided.

The term ASSIGN generally refers to the assignment of a resource or contractual right.

The term available capacity effective date generally refers to the date upon which the posted available capacity becomes available.

The term available capacity end date generally refers to the date upon which the posted available capacity ceases to be available.

The term award generally refers to the contract resulting from the matching of an offer for capacity to one or more bids.

The term award number generally refers to identification number assigned to the contract resulting from the matching of an offer for capacity to one or more bids.

The term batch number generally refers to a unique identification number assigned by the system 200 to a group of data that is transmitted using the Internet 225 to a thin client 205.

The term best available generally refers to the optimal quantity of product that is used for allocation purposes. The quantity may come, for example, from actual, estimated, or other sources.

The term bid generally refers to a transaction submitted by a bidder in reference to an offer of capacity whereby the bidder submits the terms of acceptance of the capacity.

The term bid number generally refers to an identification number that is assigned to a bid.

The term bid period start date generally refers to the first date on which interested parties may submit bids on a specific offer of capacity.

The term bid period end date generally refers to the last date on which interested parties may submit bids on a specific offer of capacity.

The term capacity release generally refers to the business practice whereby a capacity holder may offer their capacity for bidding by interested parties. The capacity may thereby be granted through an award of capacity to the winning bid.

The term capacity release company generally refers to the entity releasing capacity in a specific offer.

The term capacity release contract number generally refers to the contract number assigned to the capacity that is being offered by the capacity holder

The term capacity release term start date generally refers to the first day on which the capacity being offered for release will be available for utilization by the acquiring party.

The term capacity release term end date generally refers to the last day on which the capacity being offered for release will be available for utilization by the acquiring party.

The term capacity segment indicator generally refers to an indicator that indicates that the capacity being offered is defined within a segment of a delivery resource (e.g. pipeline) by an indicator such as, for example, location.

The term capacity type generally refers to an indication of whether the capacity has primary rights, secondary firm rights, or interruptible rights. Examples of capacity types include primary to primary, primary to secondary, and secondary to secondary.

The term CBE generally refers to confirmation by exception.

The term change cycle generally refers to the process of moving from one nomination cycle to another nomination cycle.

The term CONF generally refers to confirmation of the flow of a product, such as, for example, gas.

The term confirmed generally refers to the flow of a product that has been confirmed by the party providing the delivery resource.

The term confirmation generally refers to the process of approving and/or modifying a proposed confirmation or allocation.

The term confirming party generally refers to the party conducting the confirmation process at a location. Examples of confirming parties include upstream operator and downstream operator.

The term confirming requester generally refers to the party designated to initiate the confirmation process. Examples of confirming requesters include an operator, and a transportation service provider.

The term contract generally refers to the agreement used to transact the delivery of products.

The term contract agreement date generally refers to the date upon which the contract is in effect.

The term contract dates generally refers to the group of dates designated in the contract that are used to identify the performance parameters of the contract. Examples of contract dates include: the request date, the agreement date, the termination date, and the balance date.

The term contract request date generally refers to the date upon which a contracting party initiated the request to form a contract.

The term contract termination date generally refers to the date that the contract ceases, or ceased to be, in effect.

The term contract type generally refers to the type of delivery contract. Examples of contract types include primary firm, interruptible, and secondary firm.

The term critical notice generally refers to a notice issued by a user, delivery resource provider, or recipient that affects scheduling or adversely affects a scheduled product delivery flow. Examples of critical notices include a notice issued by a pipeline or operator that affects scheduling or adversely affects scheduled gas flow.

The term customer generally refers to an entity having a contractual relationship with a delivery resource provider.

The term CUT TO generally refers to a reduction in the quantity of delivered or scheduled product.

The term cycle generally refers to the period in a day in which nominations, confirmations, and allocations are received from thin clients 205. Examples of cycle names include timely, evening, intraday1, and intraday 2. Examples of cycle descriptions include Timely: "Open for . Nominations/Confirmations," Evening: "Closed for Confirmations. Confirmations open on Cycle 1."

The term cycle information generally identifies which cycle that a particular nomination or confirmation relates to.

The term cycle name generally refers to the name given to a particular cycle. Examples of cycle names include timely, evening, intraday1, and intraday 2. Examples of cycle descriptions include Timely: "Open for Nominations/Confirmations," Evening: "Closed for Confirmations. Confirmations pen on Cycle 1."

The term cycle status generally refers to the location in the cycle process for a particular cycle. Examples of cycle status include "Open for Nominations," "Open for Confirmations," and "Closed for Nominations."

The term delivery generally refers to the exiting of a product from a transportation service provider system, or from the control of a contractual party on the transportation service provider system.

The term delivery meter generally refers to the location at which a product exits the transportation service provider system and/or leaves control of the delivery contract. Examples of delivery meters include 200D and 300D.

The term delivery meter filter generally refers to the meter at which the product will be received by a recipient party from a transportation service provider. Examples of delivery meter filters include 200D and 300D.

The term delivery point of view generally refers to the viewing perspective of a delivery location for a product. For example, the perspective may be on the upstream side (delivering side) of the delivery location or on the downstream side (receiving side) of the delivery location.

The term delivery total generally refers to total quantity of product to be delivered to a particular delivery meter.

The term delivery volume generally refers to the volume of product delivered to a delivery meter.

The term difference generally refers to the quantity variance between two or more quantities.

The term direction of flow generally refers to whether or not a particular location is delivering product from a delivery service resource to a recipient or transmitting product from a source into a delivery service resource. Examples of directions of flow include receipt and delivery.

The term DOF (direction of flow) generally refers to the direction of flow of a product within a delivery resource provider. Examples of DOF include upstream and downstream.

The term downstream generally refers to the disposition of a product after the product has been delivered from a delivery resource provider.

The term downstream contract generally refers to the contract to which the product is transferred to. For example, when the product is delivered from the current delivery service provider to another delivery service provider system.

The term downstream entity generally refers to the party holding title to the product once the product is delivered from the current delivery service provider to another delivery service provider system.

The term DS Entity generally refers to the downstream entity.

The term Duns Number generally refers to the unique identifier assigned to an entity by Dun & Bradstreet.

The term end date generally refers to the last date of a date range.

The term fuel generally refers to the quantity of product consumed or lost during the transportation of the product. Examples of fuel include the quantity of gas consumed or lost during the transportation of gas.

The term fuel percent generally refers to the percentage of product lost or consumed during the transportation process. Examples of fuel percent include the percentage of gas consumed or lost during the transportation of gas.

The term gas day generally refers to the 24 hour period that defines that art of a gas flow cycle and the end of a gas flow cycle. In the United States, the gas day is generally set at 9 a.m. central time to 9 a.m. central time.

The term GISB (Gas Industry Standards Board) model type generally refers to the particular GISB structure used to submit a nomination for the transportation of gas. Examples of GISB model types include pathed, non-pathed, and pathed non-threaded.

The term high limit generally refers to the maximum quantity that may be allocated to a single line item in an allocation.

The term IT Ind generally refers to an indicator that designates whether or not interruptible gas is available at a location. More generally, IT Ind refers to products whose delivery may be interrupted.

The term last update date generally refers to the latest date on which an update has or may occur.

The term limit value generally refers to the quantity assigned to a high or low limit value in an allocation.

The term location generally refers to a specific point, either physical or logical, in a delivery resource, where a product can be received into the delivery

resource, delivered to the delivery resource, transmitted from the delivery resource, or transferred among title holders to the product. Examples of locations include specific locations, either physical or logical, in a pipeline, where gas can be received into the pipeline, delivered to the pipeline, transmitted from the pipeline, or transferred among title holders to the gas.

The term maintaining generally refers to entering, editing, interim saving and/or submitting system data. Examples of system data that are maintained include nominations, confirmations, predetermined allocations, capacity release offers, bids & awards, system wide notices, and operationally available and unsubscribed capacity.

The term maximum quantity generally refers to maximum quantity that will be considered.

The term meter generally refers to a device for measuring the amount of product flow. Examples of meters include gas flow meters.

The term model type generally refers to the framework or data structure used to define the data being sent. Examples of model types include pathed, non-pathed, and pathed non-threaded.

The term nomination generally refers to the process of proposing the terms and conditions for the shipment and delivery of a product.

The term nomination tracking number generally refers to an identification number that is used to track the progress of a nomination within the system 200.

The term nomination unit generally refers to the unit of measure in which the products included in a nomination are specified. Examples of nomination units include Dekatherms, Gigajoules, and Gigacalories.

The term nominated generally refers to an item that has already been identified in a nomination.

The term notice effective date generally refers to the date on which a posted notice becomes effective.

The term notice end date generally refers to the date on which a posted notice ceases to be effective.

The term notice status generally refers to the current status of posted notice. Examples of notice status include posted, revised, and canceled.

The term notice type generally refers to the classification of the notice. Examples of notice types include maintenance, curtailment, and operational flow order

The term nomination volume generally refers to the quantity requested to be transported under a specific contract on a nomination line item.

The term capacity release offer generally refers to a contract holder's posting of a portion of capacity that they wish to release.

The term offer number generally refers to an identification number assigned to an offer.

The term operator generally refers to the entity responsible for administration of a physical location within a transportation resource.

The term operator confirmations generally refers to the process by which an operator exchanges information with interconnecting entities to verify the quantity of product that will flow during a specified period of time.

The term operator confirmations for cycle generally refers to the confirmations corresponding to a specific daily cycle.

The term operationally available and unsubscribed capacity (OAUC) generally refers to quantities of delivery capacity that are not being utilized. Examples of OAUC include posted quantities of volume flow at locations in a pipeline that are not being utilized in daily transportation (operationally available) or in firm contractual commitments (unsubscribed capacity).

The term package ID generally refers to an identifier that a shipper of a product may assign to a nomination line item in order to differentiate that line item from other line items that would otherwise include the same components.

The term partner generally refers to an entity with whom a party exchanges information or enters into contractual relationships.

The term path generally refers to the route that a nominated quantity of product travels in a delivery resource. Examples of paths include the route that a nominated quantity of gas travels in a pipeline.

The term path total generally refers to the total quantity of product for a nominated path. Examples of paths include the total quantity of gas for a nominated path in a pipeline.

The term pipeline generally refers to the entity that owns and/or operates a delivery resource. Examples of pipelines include the entity that owns and/or operates a section of physical section of a pipe used for the transportation of natural gas

The term point total generally refers to the total amount of product delivered to or from a physical or logical location in a delivery resource.

The term point of view generally refers to the viewing perspective when looking at data within the system 200. Examples of points of view include receipt, delivery, contract, location.

The term posting date generally refers to the date on which an item or transaction is posted.

The term prearranged deal indicator generally refers to a code designating an offer to release capacity having a pre-arranged bidder assigned to it at the time of posting.

The term predetermined allocations generally refers to the process of defining the allocation of the delivered product among one or more recipients of the product.

The term predetermined allocation option generally refers to a predefined allocation rule.

The term preparer grid generally refers to a list of preparers, in grid format, from which one may choose a single preparer.

The term preparer list generally refers to a list of preparers from which one may select a single preparer.

The term PREV generally refers to previous.

The term priority generally refers to the ranking assigned to a transaction. Examples of priority include 1, 2, 3 ...

The term provider generally refers to a provider of a delivery resource.

The term quantity available generally refers to the quantity of product. Examples of quantity include a measure of natural gas identifying an amount available for utilization

The term rank generally refers to an indication of priority.

The term rank level generally refers to a numeric indication of rank.

The term rate unit generally refers to the measuring unit basis for a particular rate.

The term REAS (reason code) generally refers to the reason for a particular allocation adjustment.

The term receipt generally refers to the entry of product into a delivery service provider system or into the control of the contractual party on a delivery service provider system.

The term receipt meter generally refers to location where a product enters a delivery service provider system or into the control of the contractual party on the delivery service provider system.

The term receipt meter filter generally refers to the listing of available receipt meters from which a thin client 205 may select.

The term receipt point of view generally refers to the viewing perspective at a receipt location. The perspective may, for example, be on the upstream side (delivering side) of the receipt location or on the downstream side (receiving side) of the receipt location.

The term receipt total generally refers to the total quantity of product received at a receipt meter. Examples of receipt totals include the total quantity of product received at a receipt meter.

The term receipt volume generally refers to the quantity of product received at a receipt meter.

The term recipient generally refers to the recipient of a delivered product.

The term recipient grid generally refers to a grid of possible recipients from which one may select a single recipient.

The term replacement/bidder company generally refers to an entity that has placed a bid to become the entity that will use the capacity being released.

The term segment indicator generally refers to an indicator that indicates that the capacity being offered is defined within a segment of a delivery resource or by some other indication (e.g. location). Examples of segment indicators include indications that capacity being offered is defined within a segment of a pipeline.

The term scheduled generally refers to the stage within a cycle process where all product delivery has been nominated, confirmed, and the available delivery capacity has been allocated to the nomination transactions.

The term service level generally refers to the type of service entered into in a contract. Examples of service levels include P2P and P2S.

The term shipper generally refers to the entity transporting product under a contract.

The term start date generally refers to the date of commencement.

The term statement date generally refers to the date of generation of a report of information.

The term submit generally refers to the submission of information by a thin client 205.

The term submit date generally refers to the date on which a transaction was submitted by a thin client 205.

The term start date generally refers to the date on which service begins.

The term status generally refers to the status of a transaction.

The term status message generally refers to a text message describing the status.

The term system wide notice generally refers to a notice type that applies to the entire product delivery system, as opposed to notices that relate only to subsets of the product delivery system.

The term system wide notice critical indicator generally refers to an indication of a system wide notice having a critical status that typically requires an immediate response.

The term system wide notice effective date generally refers to the date on which a system wide notice is placed into effect.

The term system wide notice end date generally refers to the date on which a system wide notice ceases to be in effect.

The term system wide notice posting date generally refers to the date on which a system wide notice is posted for viewing and/or made available for downloading.

The term system wide notice ID generally refers to an identification of the system wide notice.

The term system wide notice status generally refers to the status of a system wide notice. Examples of system wide notice status include active and withdrawn.

The term system wide notice type generally refers to the type of system wide notice. Examples of system wide notice types include maintenance, curtailment, and press release.

The term time processed generally refers to the time at which a transaction was processed.

The term time submitted generally refers to the time at which a transaction was submitted.

The term total volume generally refers to the total quantity of product for a particular location, contract, or entity.

The term tracking number generally refers to an identification number assigned to a specific transaction for tracking purposes.

The term transaction type generally refers to an indication of the type of business transaction. Examples of transaction types include current business, payback, and storage.

The term transportation service provider generally refers to the entity responsible for operations and management of transactions on a physical pipeline.

The term upstream generally refers to the disposition of a product prior to its entry into a delivery resource.

The term upstream contract generally refers to the contract that the product is transferred from and into a delivery resource.

The term upstream entity generally refers to the party holding title to the product prior to the products entry into a delivery resource.

The term UOM generally refers to unit of measure.

The term UPPD generally refers to Upload to Pipeline of Prearranged Deals. The UPPD is preferably a unique identifier managed/assigned by the pipeline.

The term US/DS generally refers to upstream/downstream.

The term US/DS ENTITY generally refers to upstream/downstream entity.

The term user generally refers to a user of a delivery resource.

The term validation generally refers to the process of ensuring that the components of a transaction comply with the terms of the transaction.

The term validation code generally refers to a code provided in response to the validation process that indicates a specific error or warning. Examples of validation codes include ENMQR100 and WNMQR300.

The term validation message generally refers to a text explanation of the validation cone. Examples of validation messages include error, and receipt location not valid.

The term view generally refers to the perspective from which data is displayed.

The term volume generally refers to the numeric volume of product. Examples of volume include the numeric units of natural gas.

In a preferred embodiment, the system 200 implemented using the process 500 is provided in compliance with the Gas Industry Standard Board (GISB) standards.

In a preferred embodiment, the operation of the system 200 implemented using the process 500 is implemented using one or more of the software modules provided in the appendix to the present application and identified as: act_left.asp; act_right.asp; act_right_bot_1.asp; addNPT.asp; addPath.asp;

addPNTU.asp; AE_Trigr.vbp; AET_DA.bas; Allocation.cls; AllocationLevels.cls; AllocVolSel.bas; AsynchStart.bas; aw_help_dir.asp; aw2_report.asp; aw2BL100.vbp; aw2BL200.vbp; aw2BL300.vbp; aw2BL400.vbp; aw2BL800.vbp; aw2BL900.vbp; awbuspro.asp; awCompanyInfoRpt.asp; awConfirmsStatus.asp; awconstraints.asp; awContractListRpt.asp; awContracts.asp; awintro.asp; awMaintainConfirmations.asp; awMaintainNoms.asp; awMaintainPDA.asp; awNomActivity.asp; awNomStatus.asp; awPartner.asp; awPDAStatus.asp; awReports.asp; awReviewNoms.asp; AWSystem.cls; awSystemBasics.asp; awtrademark.asp; balancetbl.asp; balancetbl.inc; BalFuel.bas; balinfo.inc; BL_NPT.vbp; BL_SchQt.vbp; blank.asp; bottomFrame.asp; BrowserError.asp; BuildCycleStatusGrid.asp; calcDelVol.asp; calcRecVol.asp; calendar.asp; CAllocation.cls; CAllocationDestProcess.cls; CAllocationDetail.cls; CAllocationDetailList.cls; CAllocationGMSParmItem.cls; CAllocationGMSParmList.cls; CAllocationHeader.cls; CAllocationHeaderList.cls; CAllocationParameter.cls; CAllocationParmItem.cls; CAllocationParmList.cls; CAllocationQuantity.cls; CAllocationQuantityList.cls; CAllocationRule.cls; CAllocationRules.cls; CAllocationSrcProcess.cls; cancelPath.asp; CBreakUpRule.cls; CBreakUpRules.cls; CBuffer.cls; CCallBack.cls; CColWalker.cls; CConfirmationHeaderList.cls; CConfirmationLevel.cls; CConfirmationLevelRule.cls; CConfirmationLevels.cls; CConfirmationRequest.cls; CConfirmationResponse.cls; CConfirmReqDetail.cls; CConfirmReqDetailList.cls; CConfirmReqHeader.cls; CConfirmReqHeaderList.cls; CConfirmRequest.cls; CConfirmRespHeaderList.cls; CConfirmResponse.cls; CConfirmResponseQR.cls; CConfirmRespQRHeaderList.cls; cConfRequestGridItem.cls; CContract.cls; CContractData.cls; CContractPoint.cls; CContractPoints.cls; CContractPointsData.cls; CContracts.cls; CCRQRDetail.cls; CCRQRDetailList.cls; CData.cls; CDataExchange.cls; CDataServices.cls; CDataSetItem.cls; CDataSetList.cls; CDatasetManager.cls; CEmpty.cls; CError.cls; CExistingNomServer.cls; cField.cls; cFields.cls; CFileItem.cls; CFiles.cls; cG811TSIN.cls;

cG811TSIN_Detail.cls; cG811TSIN_Details.cls; cG811TSIN_Header.cls; cG811TSIN_Headers.cls; cG811TSIN_Location.cls; cG811TSIN_Locations.cls; cG811TSIN_Package.cls; cG865SQOP.cls; cG865SQOP_Detail.cls; cG865SQOP_Details.cls; cG865SQOP_Header.cls; cG865SQOP_Headers.cls; cG865SQOP_Package.cls; cG867MSIN.cls; cG867MSIN_Detail.cls; cG867MSIN_Details.cls; CGImpNomQR.cls; CGISBAllocation.cls; CGISBAllocationData.cls; CGISBAllocationDetail.cls; CGISBAllocationDetailList.cls; CGISBAllocationHeader.cls; CGISBAllocationHeaderList.cls; CGISBCinfirmReqDetailList.cls; CGISBConfirmReqDetail.cls; CGISBConfirmReqDetailList.cls; CGISBConfirmReqHeader.cls; CGISBConfirmReqHeaderList.cls; CGISBConfirmRequest.cls; CGISBConfirmRespDetail.cls; CGISBConfirmRespDetailList.cls; CGISBConfirmRespHeader.cls; CGISBConfirmRespHeaderList.cls; CGISBConfirmResponse.cls; CGISBConfirmResponseQR.cls; CGISBConfResponseQR.cls; CGISBConfRespQRDetail.cls; CGISBConfRespQRDetailList.cls; CGISBConfRespQRHeader.cls; CGISBConfrespQRHeaderList.cls; CGISBDataset.cls; CGISBError.cls; CGISBErrors.cls; CGISBMeasurement.cls; CGISBMeasurementData.cls; CGISBNomination.cls; CGISBOpSchedQtyDetail.cls; CGISBOpSchedQtyDetailList.cls; CGISBOpSchedQtyHeader.cls; CGISBOpSchedQtyHeaderList.cls; CGISBOpSchedQuantity.cls; CGISBPDA.cls; CGISBPDAData.cls; CGISBPDADetail.cls; CGISBPDADetailList.cls; CGISBPDAHeader.cls; CGISBPDAHeaderList.cls; CGISBPDAQR.cls; CGISBQuickResponse.cls; cGISBResponseDetail.cls; cGISBResponseHeader.cls; CGISBSchdQtyDetail.cls; CGISBSchdQtyDetailList.cls; CGISBSchdQtyHeader.cls; CGISBSchdQtyHeaderList.cls; CGISBSchdQtyQuantity.cls; CGISBSchdQtyQuantityList.cls; CGISBSchedQuantity.cls; cGISBSequence Number.cls; CGMSAllocation.cls; CGMSAllocationData.cls; CGMSAllocationDetail.cls; CGMSAllocationDetailList.cls; CGMSAllocationHeader.cls; CGMSAllocationHeaderList.cls;

cGMSCompanyInfo.cls; CGMSDataService.cls; CGMSDataset.cls; CGMSErrors.cls; CGMSMeasurement.cls; CGMSMeasurementData.cls; CGMSPDA.cls; CGMSPDAData.cls; CGMSPDADetail.cls; CGMSPDADetailList.cls; CGMSPDAHeader.cls; CGMSPDAHeaderList.cls; changeValues.inc; checkDuplicatePath.asp; checkDuplicatePathU.asp; checkValidPath.asp; checkVolume.asp; clsTimer.cls; CMeasurement.cls; CMeasurementDestProcess.cls; CMeasurement Detail.cls; CMeasurementDetailList.cls; CMeasurementGMSParmItem.cls; CMeasurementGMSParmList.cls; CMeasurementHeader.cls; CMeasurementHeaderList.cls; CMeasurementParameter.cls; CMeasurementSrcProcess.cls; CNCReqDetail.cls; CNCReqDetailList.cls; CNCReqHeader.cls; CNCRespDetail.cls; CNCRespDetailList.cls; CNCRespHeader.cls; CNomActivities.cls; CNomActivity.cls; CNomActivityData.cls; cNomActvy.cls; CNomDetail.cls; CNomDetailList.cls; CNomHeader.cls; CNomHeaderList.cls; CNomination.cls; CNomQRData.cls; CNomQRHeaderList.cls; CNomQuickResponse.cls; CNomQuickResponses.cls; cNomsActivity.cls; CNomStatus.cls; CNomStatuses.cls; CNQRDetail.cls; CNQRDetailList.cls; CNQRHeder.cls; CollectionUtils.cls; colordefinition.asp; colordefinition1.asp; colorRows.inc; ColTest.cls; columns.css; columnsPTH.css; ComInfo.cls; Company.cls; Company_Info.rpt; Confirmations.asp; ConfirmationStatus.asp; Confirms.SWT; Confirms.vbg; Confirms.vbp; Confirms.vbw; ConfStatus.cls; contract.cls; Contract_List.rpt; contract02.asp; contract04.asp; contract06.asp; contractChange.asp; contractChangeRefresh.asp; convert.bas; cookieheader1.asp; cookietest.asp; COpSchdDetail.cls; COpSchdQtydetail.cls; COpSchdQtyDetailList.cls; COpSchdQtyHeader.cls; COpSchdQtyHeaderList.cls; COpSchedQuantity.cls; COpScheduleQty.cls; CParameterFactory.cls; CPartner.cls; CPartnerData.cls; CPartners.cls; CPDA.cls; CPDADetail.cls; CPDADetailList.cls; CPDAGMSParmItem.cls; CPDAGMSParmList.cls; CPDAHeader.cls; CPDAHeaderList.cls; CPDAParameter.cls; CPDAQR.cls; CPDAQRDetail.cls; CPDAQRDetailList.cls; CPDAQRHeader.cls; CPDAQRHeaderList.cls;

CPDASrcProcess.cls; CQuickResponse.cls; CreateNomFieldValidation.inc; cReductionReason.cls; cReductionReasonList.cls; CReportFiles.cls; CReportManager.cls; cRequestsList.cls; Criteria.asp; CRptDataService.cls; CRptGISBDataService.cls; CRptGMSDataService.cls; CRQRHeader.cls; CSchedQtyDetail.cls; CSchedQtyDetailList.cls; CSchedQtyHeader.cls; CSchedQuantity.cls; CSchedQuantityHeaderList.cls; CScheduleQty.cls; CString.vbp; CTitle.cls; CTitleList.cls; Cycles.asp; CycleStatusJavaScript.asp; Da_ado.vbp; DataServices.bas; DataSet.cls; DataSetNames.bas; DataXchg.vbp; dates.inc; DB_Login.frm; DB_Login.frx; DB_Util.bas; dberror.asp; DBHelper.vbp; default.asp; Defaults.cls; delete.asp; deleteGISBNom.asp; deINPT.asp; DetailData.asp; DetailFrame.asp; Details.asp; disclaimer.asp; drawBalanceTable.asp; drawEmptyGridArea.asp; drawEntitySelect.asp; drawEntitySelectBox.asp; drawFilteredMeterList.asp; drawInputBlank.asp; drawJSResizeFunction.asp; drawNomStatusArea.asp; drawNPTData.asp; drawNPTGridArea.asp; drawPNTCalendar.asp; drawPNTGridArea.asp; drawPNTPathData.asp; drawPNTUData.asp; drawSearchingDatabase.asp; drawStatusCalendarAreaNPT.asp; drawStatusCalendarAreaPNT.asp; drawTransTypeSelect.asp; drawTransTypeSelectBox.asp; DS_G811TSIN.vbw; DS_ImpNomQR.vbp; DS_ImpNomQR.vbw; Dummy.cls; Ed_SchQt.vbp; Edge_NPT.vbp; enumvar.bas; ErrorCodes.bas; ErrorInc.asp; errormessage.asp; filterRank.asp; filterVolume.asp; finaltest.asp; footer.asp; formatValue.asp; frmTest.frm; frmTest.frx; ftie4style.css; ftiens4.js; Fuel.cls; G811TSIN.bas; G811TSIN.vbp; G865SQOP.bas; G865SQOP.vbp; G867MSIN.bas; G867MSIN.vbp; G867MSIN_Package.cls; GBHelper.vbp; GBHelper.vbw; getCaption.asp; getclientsettings.asp; getContractInfo.asp; getContracts.asp; getCycleDropdown.asp; getCyclesList.asp; getCycleTable.asp; getDayList.asp; getDaysInMonth.asp; GetDT.bas; getFilteredMeterList.asp; getFirstOpenCycle.asp; GetBISBRecipients.cls; GetLastDay.asp; getmeterDescription.asp; GetMeters.cls; getMonthList.aspGetNoms.bas; getNomStatusCalDataNPT.asp; getNomStatusCalDataPNT.asp; getNPTData.asp; getPipelineInfo.asp; getPipelines.asp; getPNTCycleData.asp;

getPNTData.asp; getPNTPointSum.asp; getPNTUCycleData.asp; getPNTUData.asp; GetPreparers.cls; GetRecipients.cls; GetStartAndEndDate.asp; GetTransType.cls; getYearList.asp; GI_ImpNomQR.cls; GI_SchQt.vbp; GImpNomQR.bas; GISB.cls; GISB_NPT.vbp; GISBData.vbp; GISBData.vbw; gisbDefaults.bas; GISBModification.cls; GISBObjects.vbp; GISBSeqN.vbw; GISBStat.vbg; GisbStat.vbp; GisbStat.vbw; GISBTransactProcessQueue.cls; GISBTrigger; GISBTrigger.cls; GISBUtilities.cls; global.asa.build; GlobalModule.bas; Globals.bas; globalstyle.css; globalutils.asp; globalutils.inc; glossary.asp; GMS.cls; GMS_NPT.vbp; GMS_PNT.vbp; GMS_PTH.vbp; GMSBatchStuff.bas; GMSData.vbp; GMSData.vbw; gmsDllDepends.bas; gmsdllus.bas; GMSFuels.cls; GMSFuels.vbp; GMSObjects.vbp; grid_functions.asp; header.asp; Header.cls; header.css; HeaderData.asp; HeaderFrame.asp; HeaderFrame.asp; HeaderProcessing.inc; Headers.asp; helpcontent.asp; iAllocationItem.cls; iAllociationParms.cls; IApplicationDataset.cls; ICallBack.cls; iConfirmation.cls; IConfirmationLevelParm.cls; IConfirmationLevleProcess.cls; IConfirmationReqProcess.cls; IConfirmRequestParm.cls; IConfirmRespProcess.cls; IConfirmRespQRProcess.cls; IContractParm.cls; IContractPoints.cls; IData.cls; IDataConnection.cls; IDataLoad.cls; IDataParameter.cls; IDataProcess.cls; IDataService.cls; IDataset.cls; IDestinationProcess.cls; iError.cls; IErrorMessage.cls; iEvent.cls; IGetDatasetBuffer.cls; IGISBDataLoad.cls; IGISBDataService.cls; IGISBDataset.cls; iGISBDelete.cls; IGISBErrorMessage.cls; IGISBList.cls; IGISBReference.cls; iGISBSave.cls; iGISBSubmit.cls; iGISBUpdate.cls; IGMSDataLoad.cls; IGMSDataService.cls; IGMSDataset.cls; iHeader.cls; iInformation.cls; IList.cls; IListGISB.cls; imagedefinition.asp; iMeterItem.cls; iMeterParms.cls; IMoveData.cls; IMoveDataParm.cls; ImpNomQR_Packsage.cls; InfoCol.cls; InfoMan.vbp; InfoManager.cls; INomActivityParm.cls; iNominationData.cls; INominationProcess.cls; INomQRParm.cls; INomQRProcess.cls; INomStatusParm.cls; Interaction.cls; iteractiveRowDisplay.asp; Intraday.vbg; IntraDayNom.vbp; IntraDayNom.vbw;

iObjectID.cls; IOpSchedQtyProcess.cls; IPartnerParm.cls; IPreparerItem.cls; iPreparerParms.cls; IProcessDataset.cls; iRecipientParms.cls; IReference.cls; IReportFactory.cls; ISchedQtyParm.cls; ISchedQtyProcess.cls; ISetDatasetBuffer.cls; isLeapYear.asp; iSQL.cls; IStr.cls; IUDT.cls; iValue.cls; IVarWlk.cls; jsActionKey.asp; jscookies.asp; jsFormatNumber.asp; jsrefreshNPTAdd.asp; jsrefreshPNTPathAdd.asp; jsrefreshPNTUAdd.asp; jsStatusMessages.asp; jsSubmitNom.asp; jsupdateNPTHeader.asp; localDefaults.bas; LogicalProcessOrders.asp; Login.cls; loginvalidation.asp; Main.bas; MainModule.bas; mainpage.asp; MainSub.bas; maint_bottom_frame.asp; maint_grid1.asp; maint_grid1_hdr.asp; maint_grid2.asp; maint_grid2_hdr.asp; maint_grid3.asp; maint_grid3_hdr.asp; maint_main.asp; maint_nom_drops.inc; maint_nom_grids.inc; Maint_NPT_drops.inc; maint_NPT_grids.inc; maint_NPT1.asp; maint_NPT1_hdr.asp; maint_NPT2.asp; maint_NPT2_hdr.asp; maint_PTH.asp; maint_PTH_drops.inc; maint_PTH_grids.inc; maint_top.asp; maintbal.asp; maintbal.inc; maintgrid.asp; maintnom01.asp; maintnom02.asp; maintnommain.asp; Maintties.css; maintupdates.asp; menu.asp; Meter.cls; MeterList.cls; Meters.asp; mod_SchQt.bas; mod200UDTs.bas; mod400.bas; modAW2_GMS.bas; modBL100.bas; modBL200.bas; modBL800.bas; modBL900.bas; modCString.bas; modDAex.bas; modDataBaseRoutine.bas; modDataBaseRoutines.bas; modEd_SchQt.bas; modEdgeNom.bas; modErrorCodes.bas; modFuel.bas; modGI_Noms.bas; modGI_SchQt.bas; modGISB.bas; modGISBErrorCodes.bas; modGMS_NPT.bas; modGMS_PNT.bas; modGMS_PTH.bas; modImpQR.bas; modMoveDataMgr.bas; modNomUDT.bas; modOnlyGisbUDT.bas; MouseEvents.asp; Move_SchQty.cls; MoveData.cls; MoveData.vbp; MoveMgr.vbp; Mover.vbg; Movergroup.vbg; MoverObjects.vbp; mRoutines.bas; msgbox.inc; mssccprj.scc; navbar.asp; newaltra3b.gif; newcolor.inc; nom_act_main.asp; non_dropdowns.asp; nom_dropdowns2.inc; nom_grid.inc; nom_grid1.asp; nom_grid1_hdr.asp; nom_grid2.asp; nom_grid2_hdr.asp; nom_grid3.asp; nom_grid3_hdr.asp; nom_main.asp; nom_NPT_add.inc;

nom_pathgrid_add.inc; nom_pathgrid_tbl.inc; nom_PTH_add.inc; nom_PTH_grid.inc; nom_PTH_tbl.inc; nom_top.asp; nom_validate.inc; NomActCriteria.asp; NomActivity.asp; NomActivity.css; NomActvy.vbp; NomActvy.vbw; NomCriteriaScripts.asp; NomGISBData.vbp; NomParameters.cls; NomPath.cls; NomRpt.vbp; NomRpt.vbw; Noms.cls; NomTest.asp; nomtop.css; NPT_Routines.bas; NPT_updn.inc; NPTGrid1.asp; NPTGrid1hdr.asp; NPTGrid2.asp; NPTGrid2hdr.asp; NPTParameters.cls; NPTRoutines.bas; ns_mainpage.asp; nsdefault.asp; Parms.cls; partner02.asp; pathSelected.asp; PDA.cls; pda_getinfo_utils.asp; pda_refresh_utils.asp; PDADetail.cls; PDAInterfaces.vbp; PDAL_PDQR.bas; PDALPDQR.cls; PDAObject.vbp; pdaqr01.asp; pdaqr01-styleposition.asp; pdaqr02.asp; pdaqrmain.asp; pdar01.asp; pdar01-styleposition.asp; pdar02.asp; pdarmain.asp; Pipeline.cls; pipelineChange.asp; pipelineChangeRefresh.asp; PipelineInfo.cls; PNT_Routines.bas; Point.cls; Points.cls; populateNomFrames.asp; populateNomGrids.asp; populateNomStatusCalendarNPT.asp; populateNomStatusCalendarPNT.asp; populatePNTUGrids.asp; Preparer.cls; process.asp; ProcessOrdersbyModule.asp; PTH_Routines.bas; PTHGrid.asp; PTHhdr.asp; PubMod.bas; PubVars.bas; QuickResponse.cls; RangeItem.cls; RangeItems.cls; Receipent.cls; refreshCalendarNPT.asp; refreshCalendarPNT.asp; refreshInformation.asp; refreshInformation2.asp; refreshNPTFrames.asp; refreshPNTFrames.asp; refreshPNTUFrames.asp; refreshViewCycle.asp; Report.vbg; RequestData.asp; RequestHeader.asp; Requests.asp; resizeScreen.asp; Results.cls; reviewgrid.asp; revnom01.asp; revnom02.asp; revnommain.asp; rpt_ctr.asp; rept_ctr_bottom.asp; rpt_ctr_bottom2.asp; rept_ctr_bottom3.asp; rpt_ctr_main.asp; rpt_ptn_bottom.asp; rpt_ptn_main.asp; rpt_qr_bottom.asp; rpt_qr_hdr.asp; rpt_status.asp; rpt_status_bottom.asp; rpt_status_hdr.asp; rpt_status_main.asp; rpt_utils.inc; RptFiles.vbp; RptGISB.vbp; RptGMS.vbp; Sample.asp; saveNPTRecord.asp; savePNTPathRecord.asp; savePNTURecord.asp; SchQtyParam.cls; SchQtyParameters.cls; search.asp; SequenceGenerator.bas; sessionCheck.asp;

std_getinfo_utils.asp; styledefinition.asp; submitNPTNoms.asp; Test.vbg; Test.vbp; Test.vbw; TestConfirms.vbp; TestGBHelper.vbg; TestGBHelper.vbp; TestGBHelper.vbw; TestGISBStat.vbp; TestGISBStat.vbw; TestModule.bas; Tigger.cls; Timely.cls; TimelyGroup.cls; timer.bas; Transactions.cls; TransType.cls; TransTypes.cls; trimString.asp; UDT_Edge.bas; UDT_Noms.bas; UDT_SchQty.bas; UDTDefinition.bas; UDTDefinitions.bas; updateDateFields.asp; UpdateNoms.cls; UpdateNoms.inc; updateNPTHeader.asp; updateNPTHeaderRequest.asp; updn_stream.inc; updn_stream_add.inc; UPDNEntity.cls; upperConvert.asp; UserInfo.cls; ValidatePath.cls; validation_utils.asp; Value.cls; vbsclient.inc; Vector.vbp; VectorZrows.cls; verifysetup.asp; vol_rank.asp; vol_rank_NPT.asp; volLinks.inc; XMod.bas; zAppinfo.cls; zdb.bas; zDB.cls; zDB_RS.cls; and Zutility.bas.

A computer implemented method of managing the delivery of products has been described that includes entering data relating to the delivery of the products using a user interface, interim storing some of the data in an intermediate database, submitting some of the data for processing by the system, and storing the submitted data in the intermediate database and a submitted database. In a preferred embodiment, the method further includes one or more of the following: (1) nominating the delivery of the products, and confirming the nominations; (2) allocating the delivery of the products, and confirming the allocations; (3) offering available delivery capacity for use, bidding on the available delivery capacity, and awarding the available delivery capacity; (4) generating system wide notices regarding the delivery of products; (5) generating system wide notices including operationally available and unsubscribed delivery capacity; (6) entering nomination data, retrieving corresponding nomination data, interim saving the nomination data, and submitting the nomination data for processing by the system; (7) entering nomination data, and retrieving corresponding nomination data; (8) entering predetermined allocation data, retrieving corresponding predetermined allocation data, interim saving the confirmed predetermined allocation data,

and submitting the confirmed predetermined allocation data for processing by the system; (9) entering predetermined allocation data, and retrieving corresponding predetermined allocation data; (10) entering confirmation data, and retrieving corresponding confirmation data; (11) entering predetermined allocation data, retrieving corresponding predetermined allocation data, interim saving the predetermined allocation data, and submitting the predetermined allocation data for processing by the system; (12) entering predetermined allocation data, and retrieving corresponding predetermined allocation data; (13) entering party information, and retrieving corresponding customer information for the party; (14) entering party information, and retrieving corresponding contract information for the party; (15) posting offers for available delivery capacity, posting bids for available delivery capacity, and awarding available delivery capacity; (16) entering system wide notice data, retrieving corresponding system wide notice data, interim saving the system wide notice data, and submitting the system wide notice data; (17) entering delivery capacity data, and retrieving corresponding operationally available and unsubscribed delivery capacity; and/or (18) permitting thin clients to nominate the delivery of products using pathed, non-pathed, and pathed non-threaded delivery model types.

A system for managing the delivery of products has also been described that includes means for entering data relating to the delivery of the products using a user interface, means for interim storing some of the data in an intermediate database, means for submitting some of the data for processing by the system, and means for storing the submitted data in the intermediate database and a submitted database. In a preferred embodiment, the system further includes means for one or more of the following: (1) nominating the delivery of the products, and confirming the nominations; (2) allocating the delivery of the products, and confirming the allocations; (3) offering available delivery capacity for use, bidding on the available delivery capacity, and awarding the available delivery capacity; (4) generating system wide notices regarding the delivery of products; (5) generating system wide notices including

operationally available and unsubscribed delivery capacity; (6) entering nomination data, retrieving corresponding nomination data, interim saving the nomination data, and submitting the nomination data for processing by the system; (7) entering nomination data, and retrieving corresponding nomination data; (8) entering predetermined allocation data, retrieving corresponding predetermined allocation data, interim saving the confirmed predetermined allocation data, and submitting the confirmed predetermined allocation data for processing by the system; (9) entering predetermined allocation data, and retrieving corresponding predetermined allocation data; (10) entering confirmation data, and retrieving corresponding confirmation data; (11) entering predetermined allocation data, retrieving corresponding predetermined allocation data, interim saving the predetermined allocation data, and submitting the predetermined allocation data for processing by the system; (12) entering predetermined allocation data, and retrieving corresponding predetermined allocation data; (13) entering party information, and retrieving corresponding customer information for the party; (14) entering party information, and retrieving corresponding contract information for the party; (15) posting offers for available delivery capacity, posting bids for available delivery capacity, and awarding available delivery capacity; (16) entering system wide notice data, retrieving corresponding system wide notice data, interim saving the system wide notice data, and submitting the system wide notice data; (17) entering delivery capacity data, and retrieving corresponding operationally available and unsubscribed delivery capacity; and/or (18) permitting thin clients to nominate the delivery of products using pathed, non-pathed, and pathed non-threaded delivery model types.

A computer program for managing the delivery of products has also been described that includes instructions for entering data relating to the delivery of the products using a user interface, instructions for interim storing some of the data in an intermediate database, instructions for submitting some of the data for processing by the system, and instructions for storing the submitted data in the intermediate database and a submitted database. In a preferred

embodiment, the computer program further includes instructions for one or more of the following: (1) nominating the delivery of the products, and confirming the nominations; (2) allocating the delivery of the products, and confirming the allocations; (3) offering available delivery capacity for use, bidding on the available delivery capacity, and awarding the available delivery capacity; (4) generating system wide notices regarding the delivery of products; (5) generating system wide notices including operationally available and unsubscribed delivery capacity; (6) entering nomination data, retrieving corresponding nomination data, interim saving the nomination data, and submitting the nomination data for processing by the system; (7) entering nomination data, and retrieving corresponding nomination data; (8) entering predetermined allocation data, retrieving corresponding predetermined allocation data, interim saving the confirmed predetermined allocation data, and submitting the confirmed predetermined allocation data for processing by the system; (9) entering predetermined allocation data, and retrieving corresponding predetermined allocation data; (10) entering confirmation data, and retrieving corresponding confirmation data; (11) entering predetermined allocation data, retrieving corresponding predetermined allocation data, interim saving the predetermined allocation data, and submitting the predetermined allocation data for processing by the system; (12) entering predetermined allocation data, and retrieving corresponding predetermined allocation data; (13) entering party information, and retrieving corresponding customer information for the party; (14) entering party information, and retrieving corresponding contract information for the party; (15) posting offers for available delivery capacity, posting bids for available delivery capacity, and awarding available delivery capacity; (16) entering system wide notice data, retrieving corresponding system wide notice data, interim saving the system wide notice data, and submitting the system wide notice data; (17) entering delivery capacity data, and retrieving corresponding operationally available and unsubscribed delivery capacity; and/or (18) permitting thin clients to nominate

the delivery of products using pathed, non-pathed, and pathed non-threaded delivery model types.

A system for managing the scheduling and delivery of products has also been described that includes an N-tiered database structure including interim stored and submitted scheduling and delivery data. In a preferred embodiment, the products include energy products.

A computer program has also been described that includes instructions for providing an N-tiered database structure including interim stored and submitted scheduling and delivery data. In a preferred embodiment, the products include energy products.

A system for managing the delivery of products has also been described that includes one or more thin clients adapted to enter data related to the delivery of the products, an intermediate database for storing interim saved data and submitted data related to the delivery of the products, a submitted database for storing submitted data related to the delivery of the products, and a host computer coupled to the thin clients, the intermediate database, and the submitted database adapted to process the submitted data.

A computerized database for a system for managing the delivery of products has also been described that includes an intermediate database including interim stored data and submitted data, and a submitted database including the submitted data.

A system for managing the delivery of products has also been described that includes one or more thin clients adapted to enter data related to the delivery of the products, means for storing interim saved data and submitted data, means for storing submitted data, and means for processing the submitted data.

As will be recognized by persons of ordinary skill in the art having the benefit of the present disclosure, multiple variations and modifications can be made in the embodiments of the invention. Although certain illustrative embodiments of the invention have been shown and described, a wide range of modifications, changes, and substitutions is contemplated in the foregoing

disclosure. In some instances, some features of the present invention may be employed without a corresponding use of the other features. Accordingly, it is appropriate that the foregoing description be construed broadly and understood as being given by way of illustration and example only, the spirit and scope of the invention being limited only by the appended claims.

Claims

What is Claimed Is:

1. A computer implemented method of managing the delivery of products, comprising:
entering data relating to the delivery of the products using a user interface;
interim storing some of the data in an intermediate database;
submitting some of the data for processing by the system; and
storing the submitted data in the intermediate database and a submitted database.

2. The method of claim 1, further comprising:
nominating the delivery of the products; and
confirming the nominations.

3. The method of claim 1, further comprising:
allocating the delivery of the products; and
confirming the allocations.

4. The method of claim 1, further comprising:
offering available delivery capacity for use;
bidding on the available delivery capacity; and
awarding the available delivery capacity.

5. The method of claim 1, further comprising:
generating system wide notices regarding the delivery of products.

6. The method of claim 1, further comprising:

generating system wide notices including operationally available and unsubscribed delivery capacity.

7. The method of claim 1, further comprising:
entering nomination data;
retrieving corresponding nomination data;
interim saving the nomination data; and
submitting the nomination data for processing by the system.

8. The method of claim 1, further comprising:
entering nomination data; and
retrieving corresponding nomination data.

9. The method of claim 1, further comprising:
entering predetermined allocation data;
retrieving corresponding predetermined allocation data;
interim saving the confirmed predetermined allocation data; and
submitting the confirmed predetermined allocation data for processing by the system.

10. The method of claim 1, further comprising:
entering predetermined allocation data; and
retrieving corresponding predetermined allocation data.

11. The method of claim 1, further comprising:
entering confirmation data; and
retrieving corresponding confirmation data.

12. The method of claim 1, further comprising:
entering predetermined allocation data;
retrieving corresponding predetermined allocation data;

interim saving the predetermined allocation data; and

submitting the predetermined allocation data for processing by the system.

13. The method of claim 1, further comprising:

entering predetermined allocation data; and

retrieving corresponding predetermined allocation data.

14. The method of claim 1, further comprising:

entering party information; and

retrieving corresponding customer information for the party.

15. The method of claim 1, further comprising:

entering party information; and

retrieving corresponding contract information for the party.

16. The method of claim 1, further comprising:

posting offers for available delivery capacity;

posting bids for available delivery capacity; and

awarding available delivery capacity.

17. The method of claim 1, further comprising:

entering system wide notice data;

retrieving corresponding system wide notice data;

interim saving the system wide notice data; and

submitting the system wide notice data.

18. The method of claim 1, further comprising:

entering delivery capacity data; and

retrieving corresponding operationally available and unsubscribed delivery capacity.

19. The method of claim 1, further comprising:
permitting thin clients to nominate the delivery of products using pathed, non-pathed, and pathed non-threaded delivery model types.

20. A system for managing the delivery of products, comprising:
means for entering data relating to the delivery of the products using a user interface;
means for interim storing some of the data in an intermediate database;
means for submitting some of the data for processing by the system; and
means for storing the submitted data in the intermediate database and a submitted database.

21. The system of claim 20, further comprising:
means for nominating the delivery of the products; and
means for confirming the nominations.

22. The system of claim 20, further comprising:
means for allocating the delivery of the products; and
means for confirming the allocations.

23. The system of claim 20, further comprising:
means for offering available delivery capacity for use;
means for bidding on the available delivery capacity; and
means for awarding the available delivery capacity.

24. The system of claim 20, further comprising:
means for generating system wide notices regarding the delivery of products.

25. The system of claim 20, further comprising:
means for generating system wide notices including operationally available and unsubscribed delivery capacity.

26. The system of claim 20, further comprising:
means for entering nomination data;
means for retrieving corresponding nomination data;
means for interim saving the nomination data; and
means for submitting the nomination data for processing by the system.

27. The system of claim 20, further comprising:
means for entering nomination data; and
means for retrieving corresponding nomination data.

28. The system of claim 20, further comprising:
means for entering predetermined allocation data;
means for retrieving corresponding predetermined allocation data;
means for interim saving the confirmed predetermined allocation data; and
means for submitting the confirmed predetermined allocation data for processing by the system.

29. The system of claim 20, further comprising:
means for entering predetermined allocation data; and
means for retrieving corresponding predetermined allocation data.

30. The system of claim 20, further comprising:
means for entering confirmation data; and
means for retrieving corresponding confirmation data.

31. The system of claim 20, further comprising:

means for entering predetermined allocation data;
means for retrieving corresponding predetermined allocation data;
means for interim saving the predetermined allocation data; and
means for submitting the predetermined allocation data for processing by the system.

32. The system of claim 20, further comprising:
means for entering predetermined allocation data; and
means for retrieving corresponding predetermined allocation data.

33. The system of claim 20, further comprising:
means for entering party information; and
means for retrieving corresponding customer information for the party.

34. The system of claim 20, further comprising:
means for entering party information; and
means for retrieving corresponding contract information for the party.

35. The system of claim 20, further comprising:
means for posting offers for available delivery capacity;
means for posting bids for available delivery capacity; and
means for awarding available delivery capacity.

36. The system of claim 20, further comprising:
means for entering system wide notice data;
means for retrieving corresponding system wide notice data;
means for interim saving the system wide notice data; and
means for submitting the system wide notice data.

37. The system of claim 20, further comprising:
means for entering delivery capacity data; and

means for retrieving corresponding operationally available and unsubscribed delivery capacity.

38. The system of claim 20, further comprising:
means for permitting thin clients to nominate the delivery of products using pathed, non-pathed, and pathed non-threaded delivery model types.

39. A computer program for managing the delivery of products, comprising:
instructions for entering data relating to the delivery of the products using a user interface;
instructions for interim storing some of the data in an intermediate database;
instructions for submitting some of the data for processing by the system; and
instructions for storing the submitted data in the intermediate database and a submitted database.

40. The computer program of claim 39, further comprising:
instructions for nominating the delivery of the products; and
instructions for confirming the nominations.

41. The computer program of claim 39, further comprising:
instructions for allocating the delivery of the products; and
instructions for confirming the allocations.

42. The computer program of claim 39, further comprising:
instructions for offering available delivery capacity for use;
instructions for bidding on the available delivery capacity; and
instructions for awarding the available delivery capacity.

43. The computer program of claim 39, further comprising:
instructions for generating system wide notices regarding the delivery of products.

44. The computer program of claim 39, further comprising:
instructions for generating system wide notices including operationally available and unsubscribed delivery capacity.

45. The computer program of claim 39, further comprising:
instructions for entering nomination data;
instructions for retrieving corresponding nomination data;
instructions for interim saving the nomination data; and
instructions for submitting the nomination data for processing by the system.

46. The computer program of claim 39, further comprising:
instructions for entering nomination data; and
instructions for retrieving corresponding nomination data.

47. The computer program of claim 39, further comprising:
instructions for entering predetermined allocation data;
instructions for retrieving corresponding predetermined allocation data;
instructions for interim saving the confirmed predetermined allocation data; and
instructions for submitting the confirmed predetermined allocation data for processing by the system.

48. The computer program of claim 39, further comprising:
instructions for entering predetermined allocation data; and
instructions for retrieving corresponding predetermined allocation data.

49. The computer program of claim 39, further comprising:
instructions for entering confirmation data; and
instructions for retrieving corresponding confirmation data.

50. The computer program of claim 39, further comprising:

instructions for entering predetermined allocation data;
instructions for retrieving corresponding predetermined allocation data;
instructions for interim saving the predetermined allocation data; and
instructions for submitting the predetermined allocation data for processing by the system.

51. The computer program of claim 39, further comprising:
instructions for entering predetermined allocation data; and
instructions for retrieving corresponding predetermined allocation data.

52. The computer program of claim 39, further comprising:
instructions for entering party information; and
instructions for retrieving corresponding customer information for the party.

53. The computer program of claim 39, further comprising:
instructions for entering party information; and
instructions for retrieving corresponding contract information for the party.

54. The computer program of claim 39, further comprising:
instructions for posting offers for available delivery capacity;
instructions for posting bids for available delivery capacity; and
instructions for awarding available delivery capacity.

55. The computer program of claim 39, further comprising:
instructions for entering system wide notice data;
instructions for retrieving corresponding system wide notice data;
instructions for interim saving the system wide notice data; and
instructions for submitting the system wide notice data.

56. The computer program of claim 39, further comprising:
instructions for entering delivery capacity data; and
instructions for retrieving corresponding operationally available and unsubscribed delivery capacity.

57. The computer program of claim 39, further comprising:
instructions for permitting thin clients to nominate the delivery of products using pathed, non-pathed, and pathed non-threaded delivery model types.

58. A computer implemented method for managing the scheduling and delivery of products, comprising:
providing an N-tiered database structure including interim stored and submitted scheduling and delivery data.

59. The method of claim 58, wherein the products include energy products.

60. A system for managing the scheduling and delivery of products, comprising:
an N-tiered database structure including interim stored and submitted scheduling and delivery data.

61. The system of claim 60, wherein the products include energy products.

62. A computer program, including:

instructions for providing an N-tiered database structure including interim stored and submitted scheduling and delivery data.

63. The computer program of claim 62, wherein the products include energy products.

64. A system for managing the delivery of products, comprising:
one or more thin clients adapted to enter data related to the delivery of the products;
an intermediate database for storing interim saved data and submitted data related to the delivery of the products;
a submitted database for storing submitted data related to the delivery of the products; and
a host computer coupled to the thin clients, the intermediate database, and the submitted database adapted to process the submitted data.

65. A computerized database for a system for managing the delivery of products, comprising:
an intermediate database including interim stored data and submitted data; and
a submitted database including the submitted data.

66. A system for managing the delivery of products, comprising:
means for permitting one or more thin clients adapted to enter data related to the delivery of the products;
means for storing interim saved data and submitted data;
means for storing submitted data; and
means for processing the submitted data.

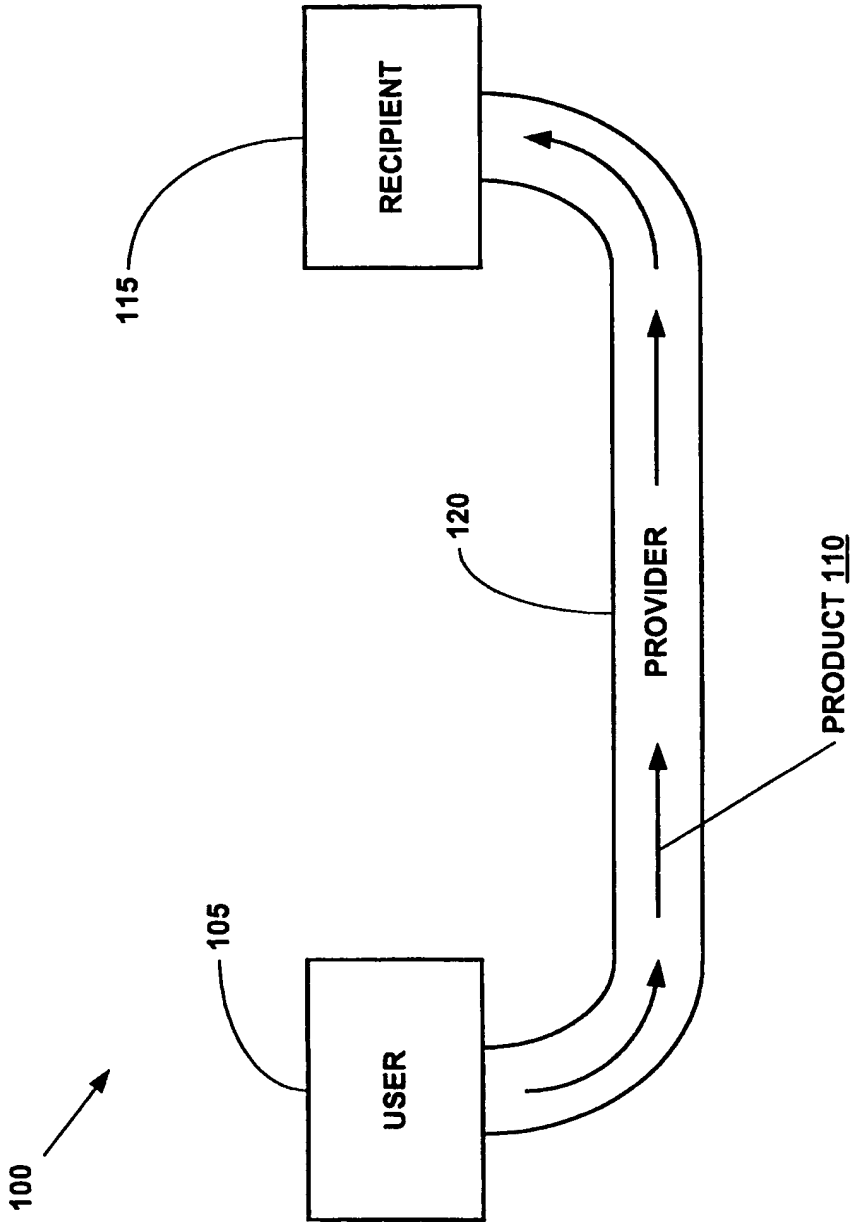


FIGURE 1

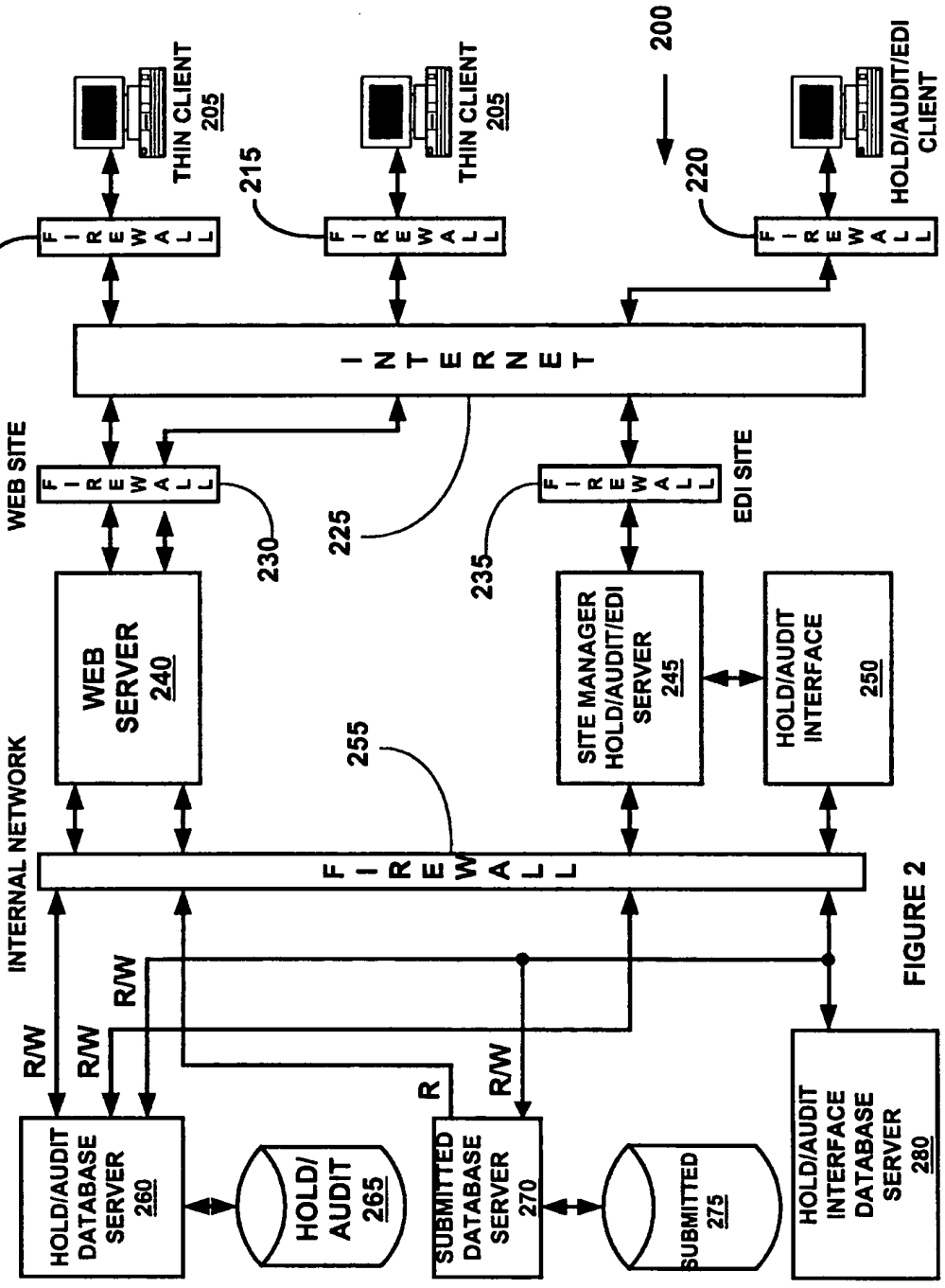

200
THIN CLIENT 205
THIN CLIENT 205
HOLD/AUDIT/EDI CLIENT 210
215
215
220
FIREWALL
INTERNET
WEB SITE
EDI SITE
225
230
235
WEB SERVER 240
SITE MANAGER HOLD/AUDIT/EDI SERVER 245
HOLD/AUDIT INTERFACE 250
255
INTERNAL NETWORK
FIREWALL
R/W
R/W
R/W
R
R/W
HOLD/AUDIT DATABASE SERVER 260
HOLD/ AUDIT 265
SUBMITTED DATABASE SERVER 270
SUBMITTED 275
HOLD/AUDIT INTERFACE DATABASE SERVER 280

FIGURE 2

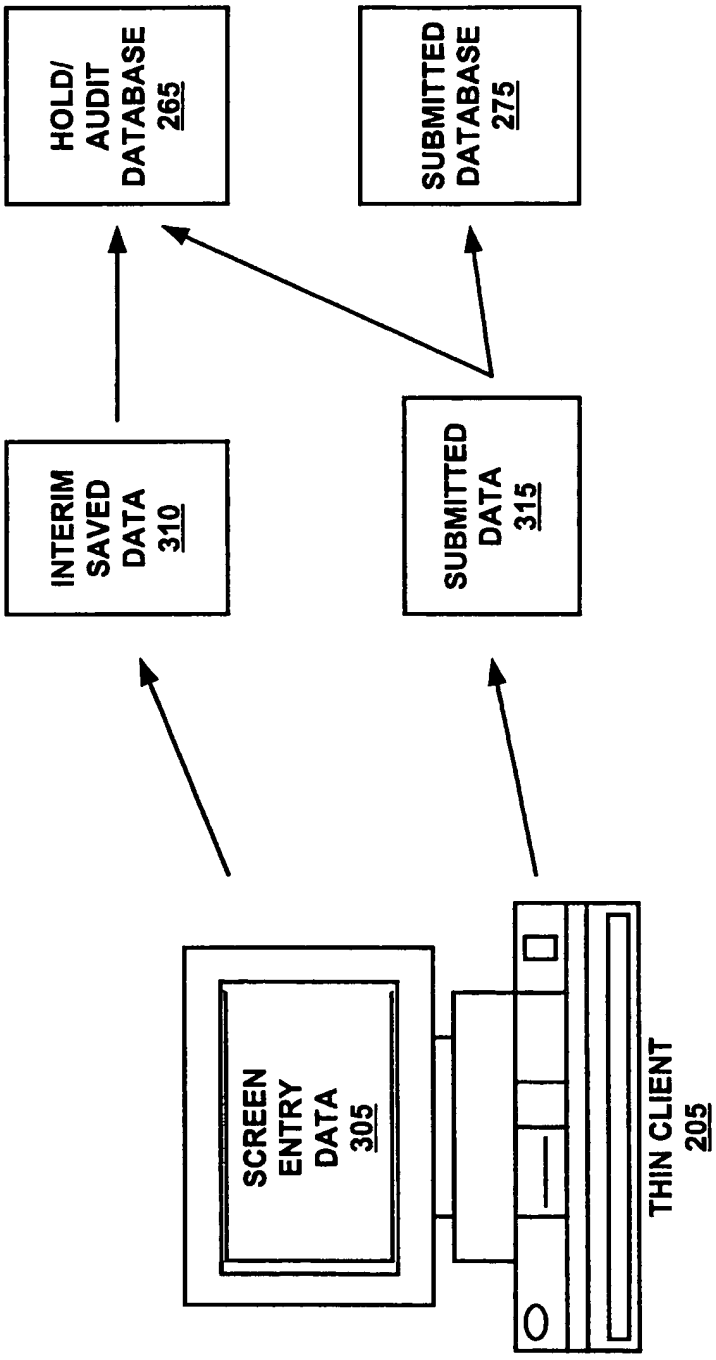
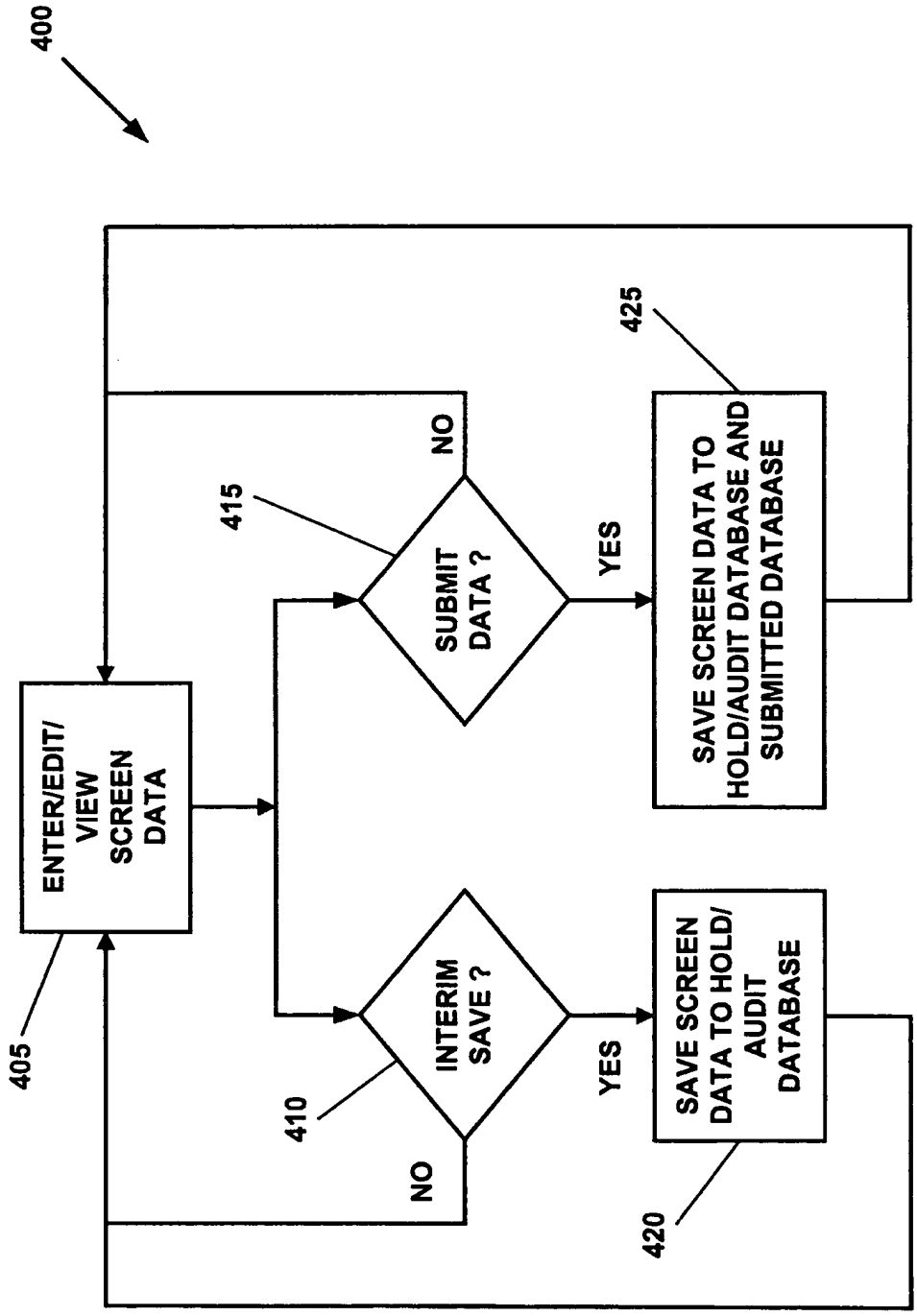

HOLD/
AUDIT
DATABASE
265
SUBMITTED
DATABASE
275
INTERIM
SAVED
DATA
310
SUBMITTED
DATA
315
SCREEN
ENTRY
DATA
305
THIN CLIENT
205

FIGURE 3


400
405
ENTER/EDIT/ VIEW SCREEN DATA
410
INTERIM SAVE ?
NO
YES
415
SUBMIT DATA ?
NO
YES
420
SAVE SCREEN DATA TO HOLD/ AUDIT DATABASE
425
SAVE SCREEN DATA TO HOLD/AUDIT DATABASE AND SUBMITTED DATABASE

4/62

FIGURE 4

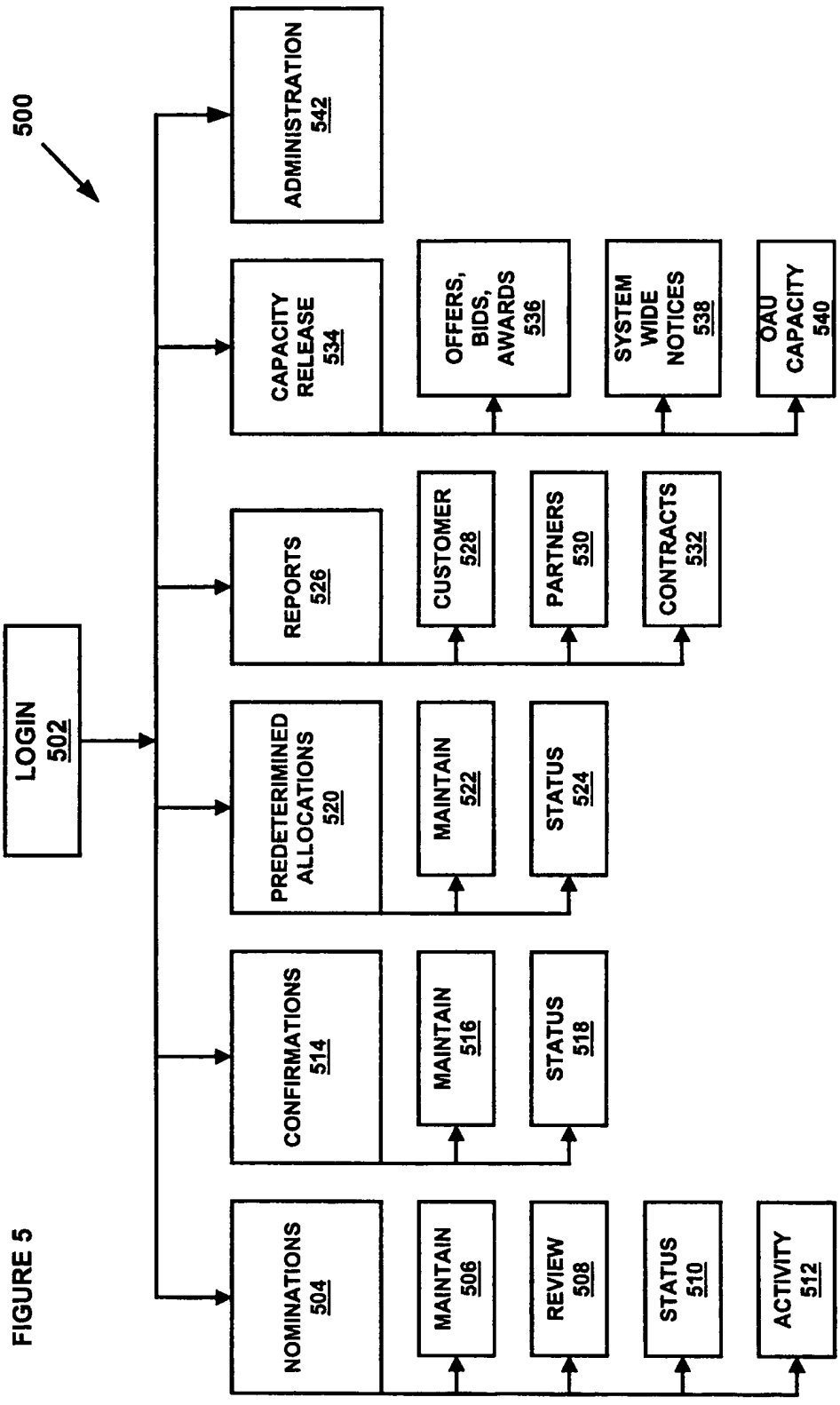

500
LOGIN
502
NOMINATIONS
504
MAINTAIN
506
REVIEW
508
STATUS
510
ACTIVITY
512
CONFIRMATIONS
514
MAINTAIN
516
STATUS
518
PREDETERIMINED ALLOCATIONS
520
MAINTAIN
522
STATUS
524
REPORTS
526
CUSTOMER
528
PARTNERS
530
CONTRACTS
532
CAPACITY RELEASE
534
OFFERS, BIDS, AWARDS
536
SYSTEM WIDE NOTICES
538
OAU CAPACITY
540
ADMINISTRATION
542

FIGURE 5

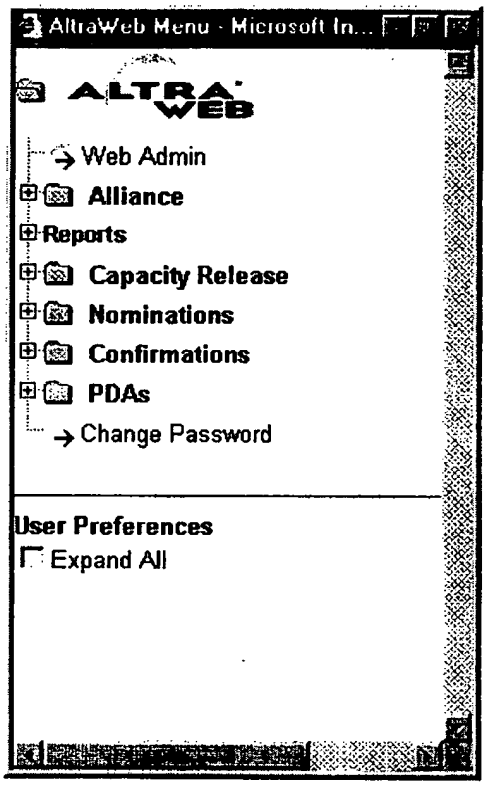

AltraWeb Menu - Microsoft In...
ALTRA WEB
Web Admin
Alliance
Reports
Capacity Release
Nominations
Confirmations
PDAs
Change Password
User Preferences
Expand All

FIGURE 5a

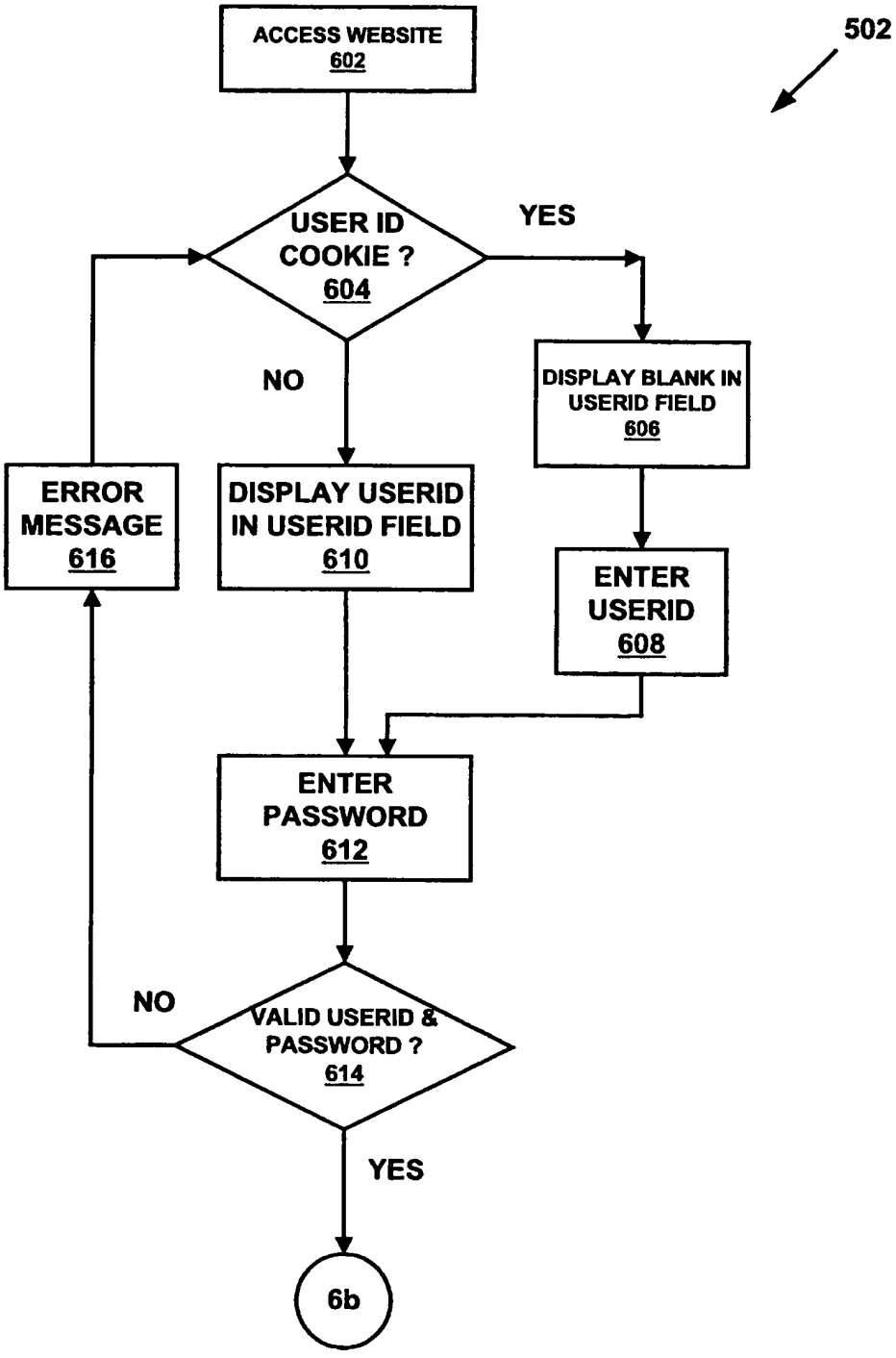
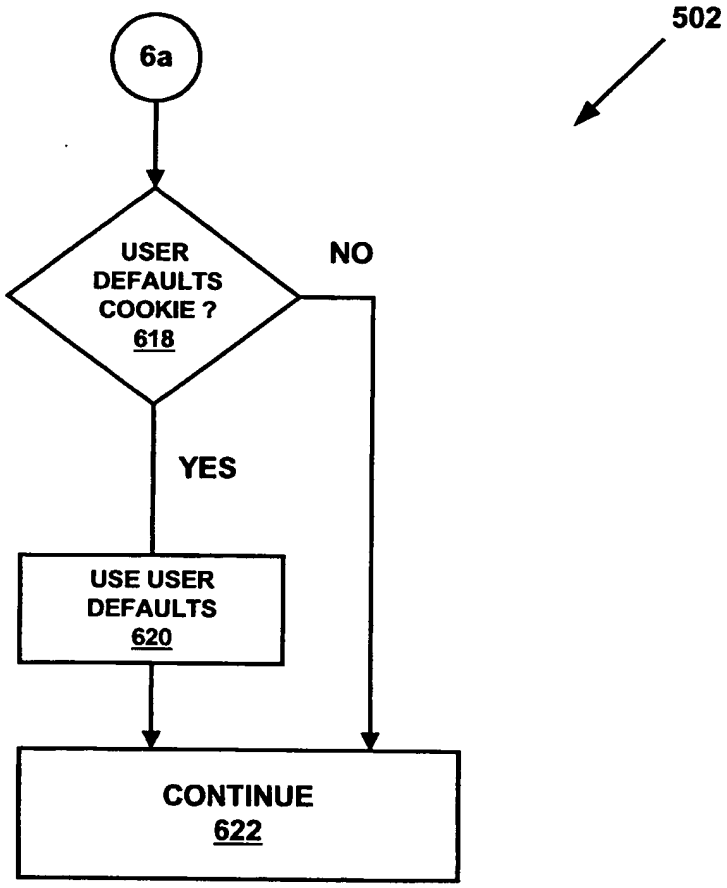

502
ACCESS WEBSITE
602
USER ID COOKIE ?
604
YES
NO
DISPLAY BLANK IN USERID FIELD
606
ENTER USERID
608
ERROR MESSAGE
616
DISPLAY USERID IN USERID FIELD
610
ENTER PASSWORD
612
NO
VALID USERID & PASSWORD ?
614
YES
6b

FIGURE 6a

FIGURE 6b


502
6a
USER DEFAULTS COOKIE ? 618
NO
YES
USE USER DEFAULTS 620
CONTINUE 622

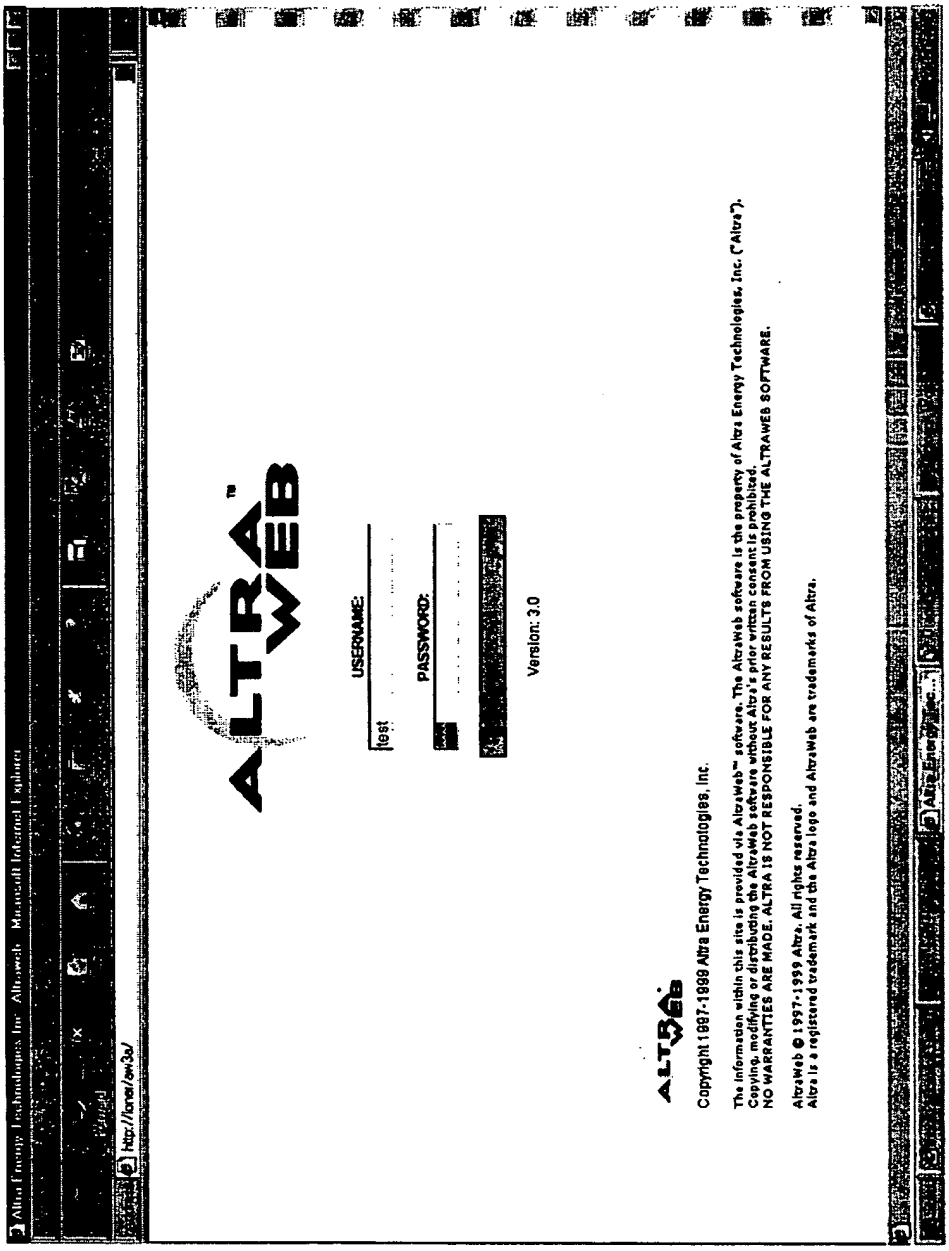

Altra Energy Technologies Inc - AltraWeb - Microsoft Internet Explorer
http://tanel/aw3a/
ALTRA WEB
USERNAME:
test
PASSWORD:
Version: 3.0
ALTRAWEB
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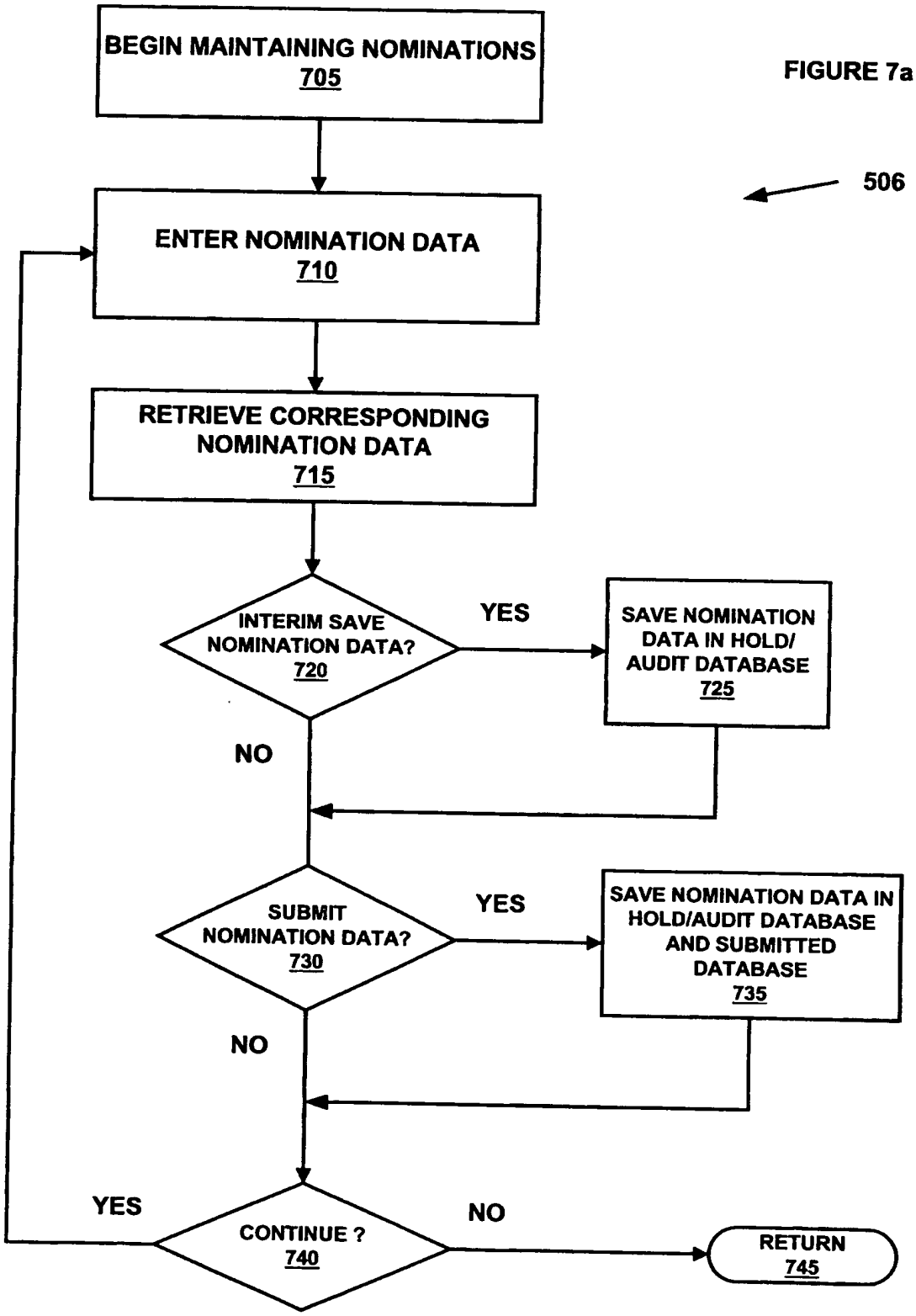
FIGURE 6c

FIGURE 7a


BEGIN MAINTAINING NOMINATIONS
705
506
ENTER NOMINATION DATA
710
RETRIEVE CORRESPONDING NOMINATION DATA
715
INTERIM SAVE NOMINATION DATA?
720
YES
SAVE NOMINATION DATA IN HOLD/ AUDIT DATABASE
725
NO
SUBMIT NOMINATION DATA?
730
YES
SAVE NOMINATION DATA IN HOLD/AUDIT DATABASE AND SUBMITTED DATABASE
735
NO
YES
CONTINUE ?
740
NO
RETURN
745

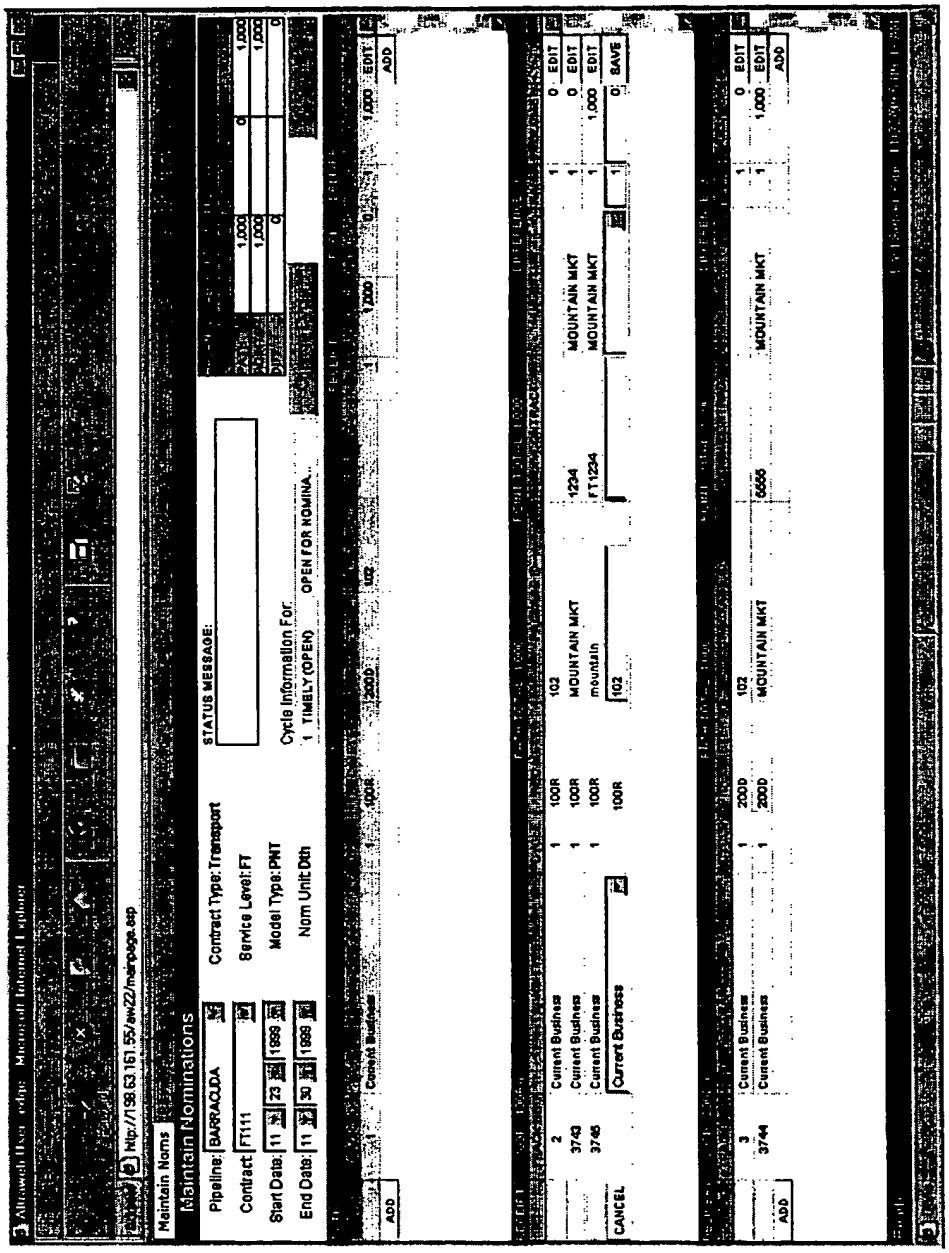

Maintain Noms
Maintain Nominations
Pipeline: BARRACUDA
Contract: FT111
Start Date: 11 23 1999
End Date: 11 30 1999
Contract Type: Transport
Service Level: FT
Model Type: PNT
Nom Unit: Dth
STATUS MESSAGE:
Cycle Information For:
1 TIMELY (OPEN)
OPEN FOR NOMINA...
Current Business
MOUNTAIN MKT
CANCEL
SAVE
ADD
EDIT

FIGURE 7b

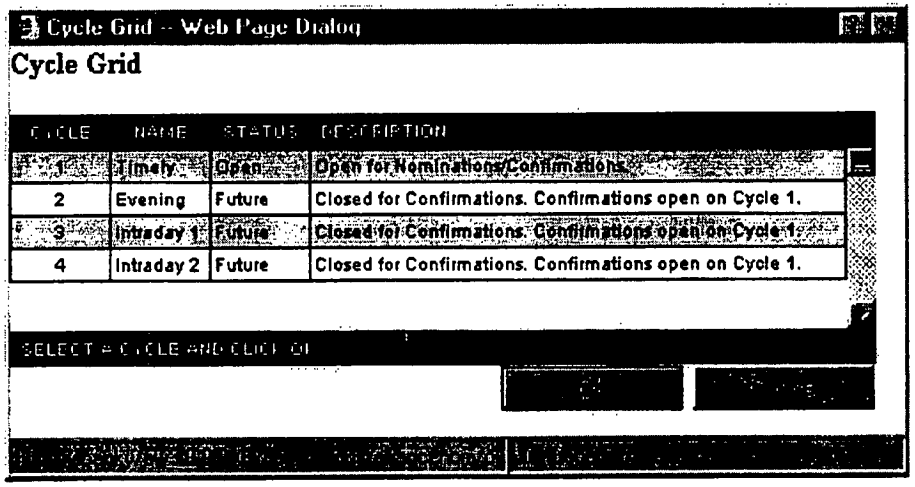


FIGURE 7c

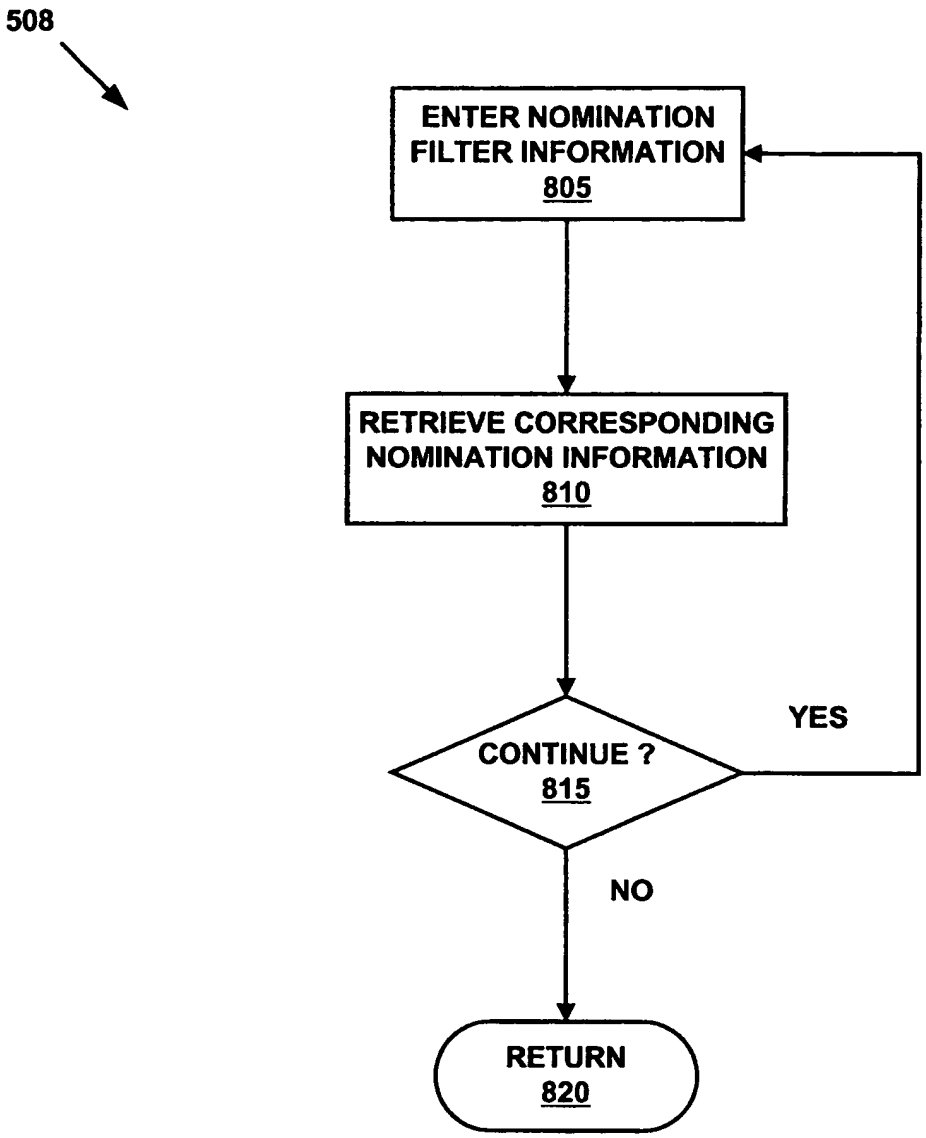

508
ENTER NOMINATION FILTER INFORMATION
805
RETRIEVE CORRESPONDING NOMINATION INFORMATION
810
CONTINUE ?
815
YES
NO
RETURN
820

FIGURE 8a

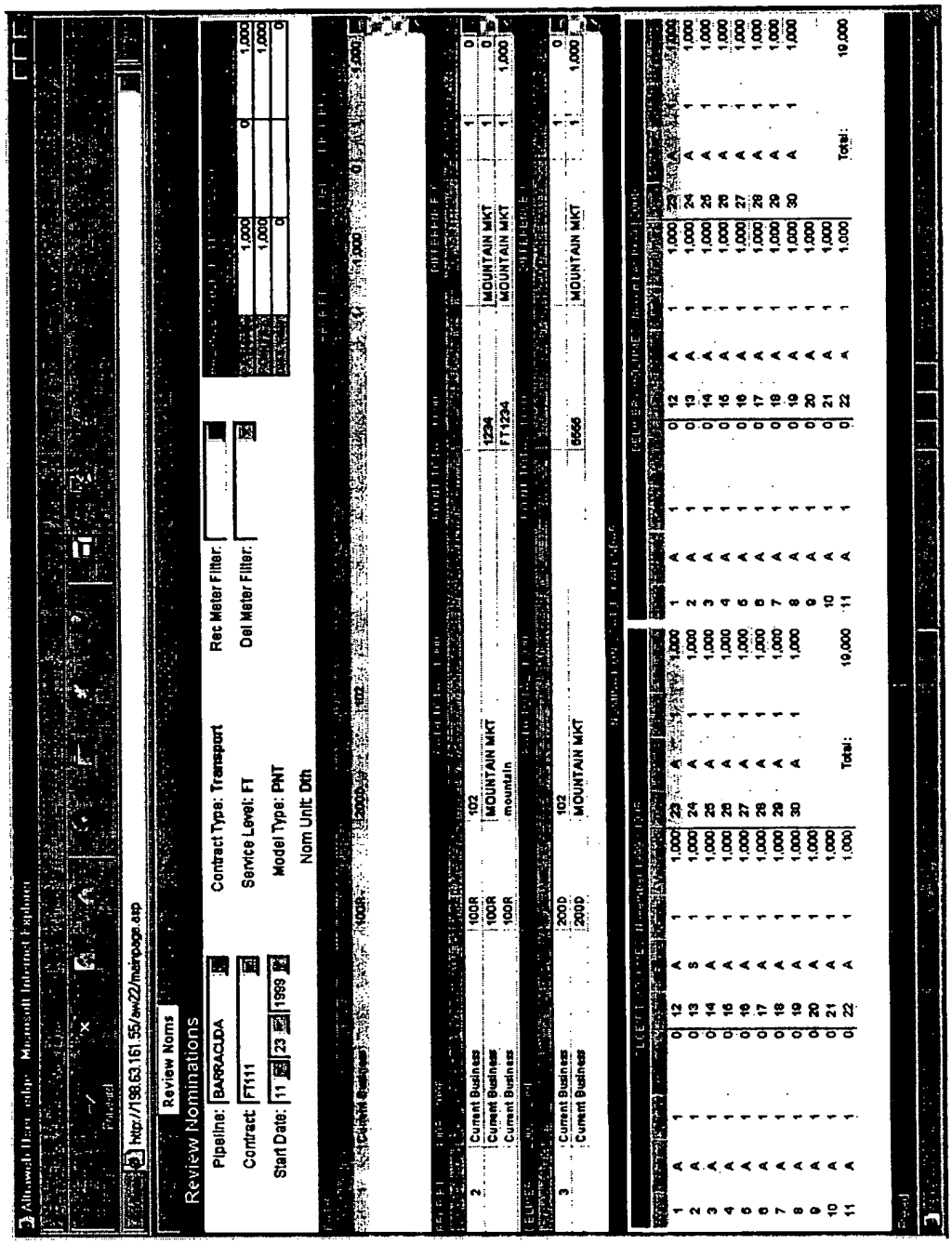

Review Noms
Review Nominations
Pipeline: BARRACUDA
Contract: FT111
Start Date: 11 23 1999
Contract Type: Transport
Service Level: FT
Model Type: PNT
Nom Unit: Dth
Rec Meter Filter:
Del Meter Filter:
MOUNTAIN MKT
MOUNTAIN MKT
MOUNTAIN MKT
MOUNTAIN MKT
Total:
Total:

FIGURE 8b

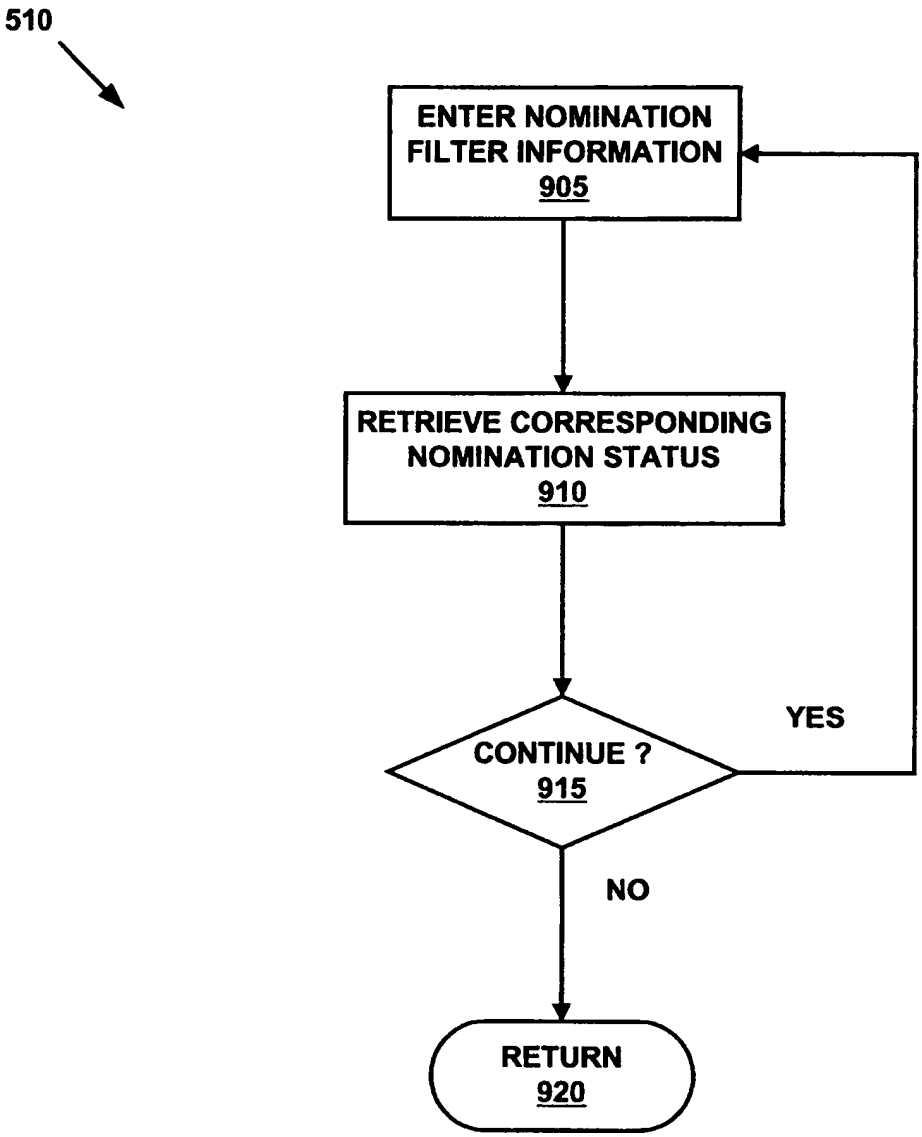

510
ENTER NOMINATION FILTER INFORMATION
905
RETRIEVE CORRESPONDING NOMINATION STATUS
910
CONTINUE ?
915
YES
NO
RETURN
920

FIGURE 9a

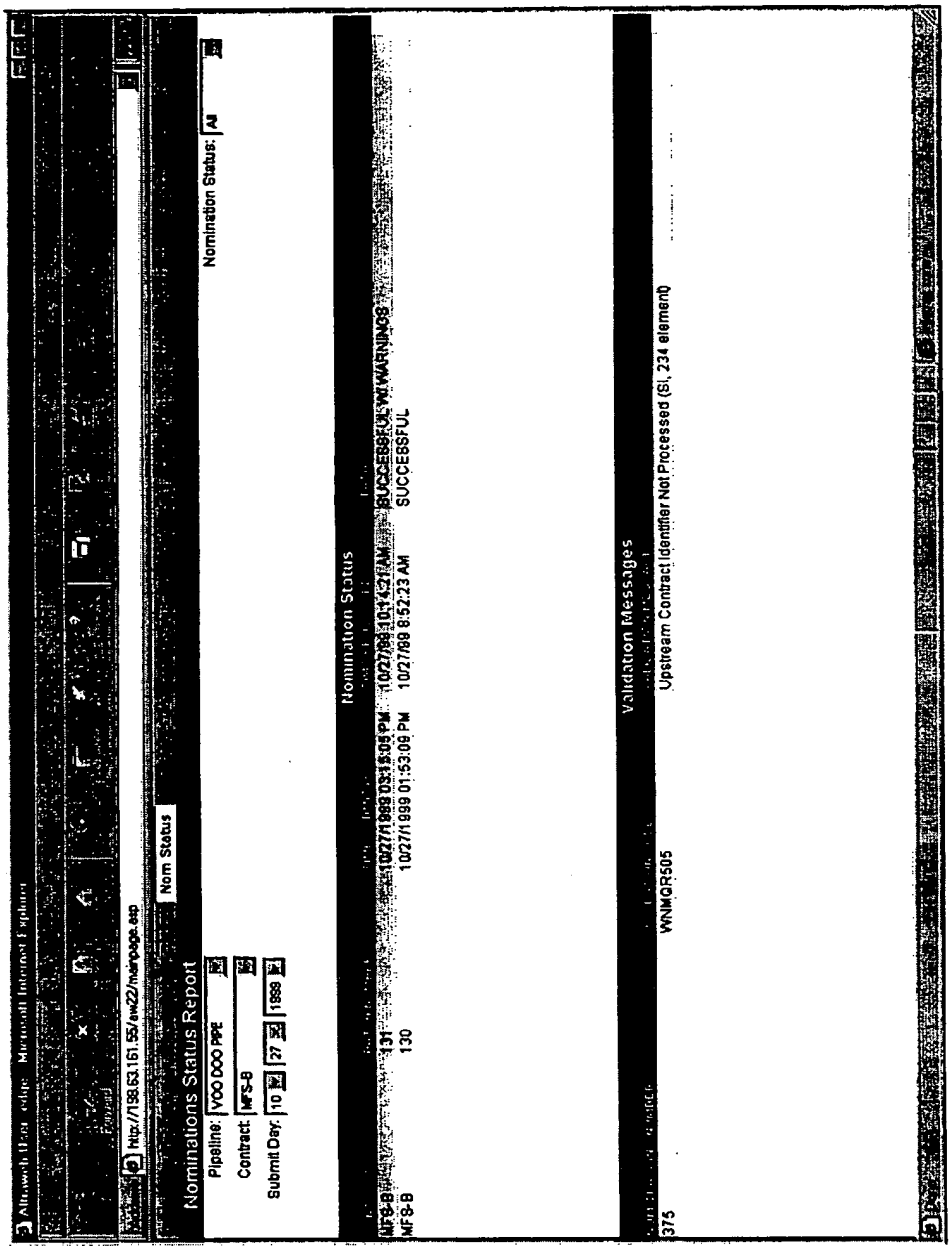

Nom Status
Nominations Status Report
Pipeline: VOO DOO PIPE
Contract: MFS-B
Submit Day: 10 27 1999
Nomination Status: All
Nomination Status
MFS-B 130 10/27/1999 01:53:09 PM 10/27/1999 8:52:23 AM SUCCESSFUL
Validation Messages
375 WNMQR505 Upstream Contract Identifier Not Processed (SI, 234 element)

FIGURE 9b

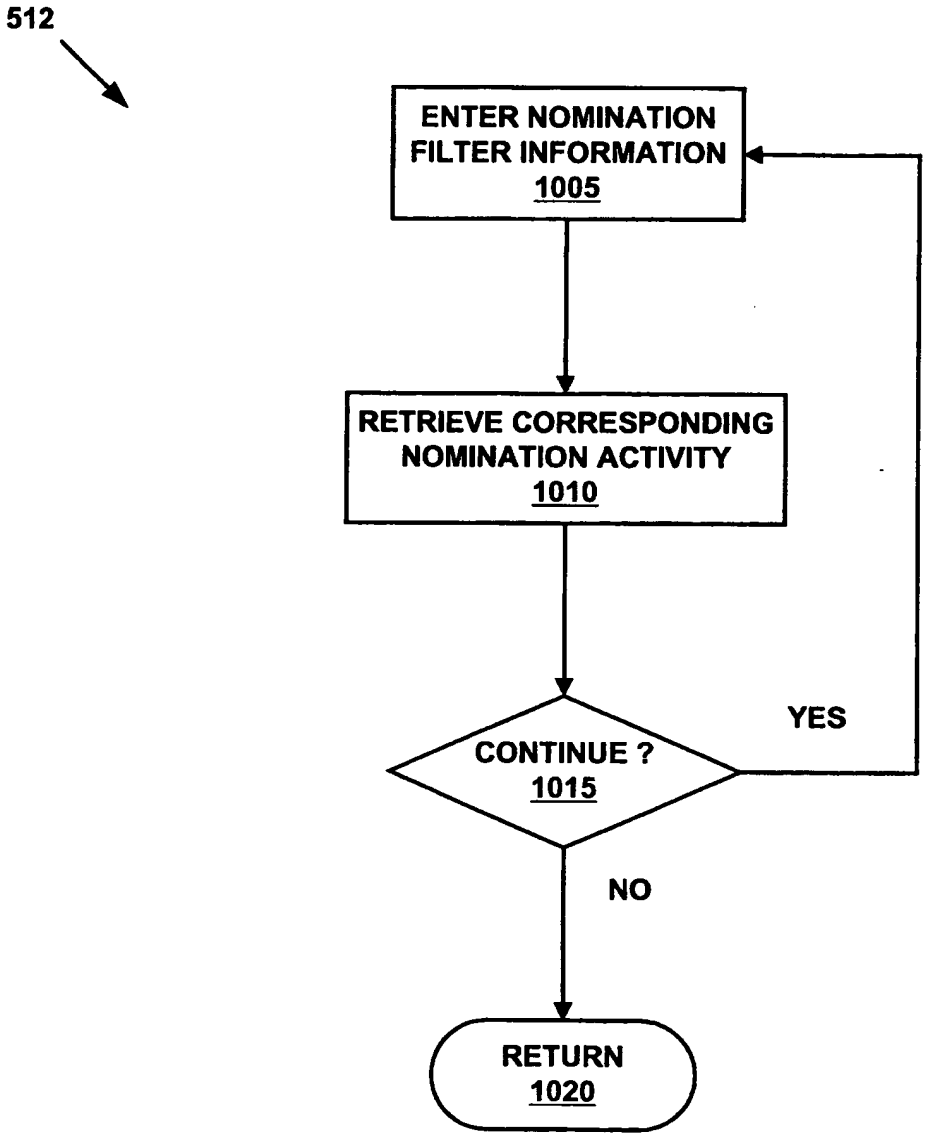

512
ENTER NOMINATION FILTER INFORMATION 1005
RETRIEVE CORRESPONDING NOMINATION ACTIVITY 1010
CONTINUE ? 1015
YES
NO
RETURN 1020

FIGURE 10a

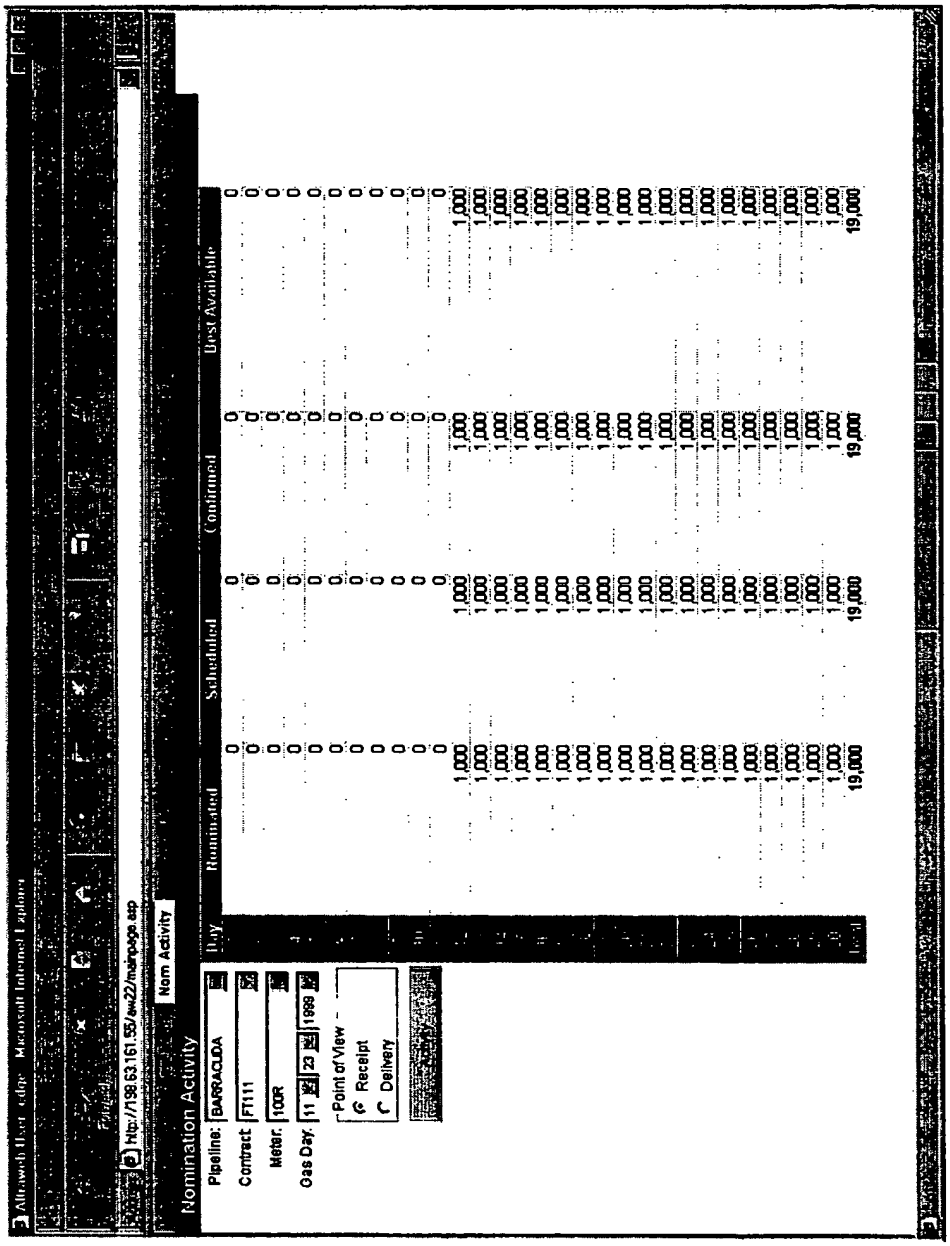

Nomination Activity
Nom Activity
Pipeline: BARRACUDA
Contract: FT111
Meter: 100R
Gas Day: 11 23 1999
Point of View
Receipt
Delivery
Nominated
Scheduled
Confirmed
Unsched Available
19,000

FIGURE 10b

FIGURE 11a

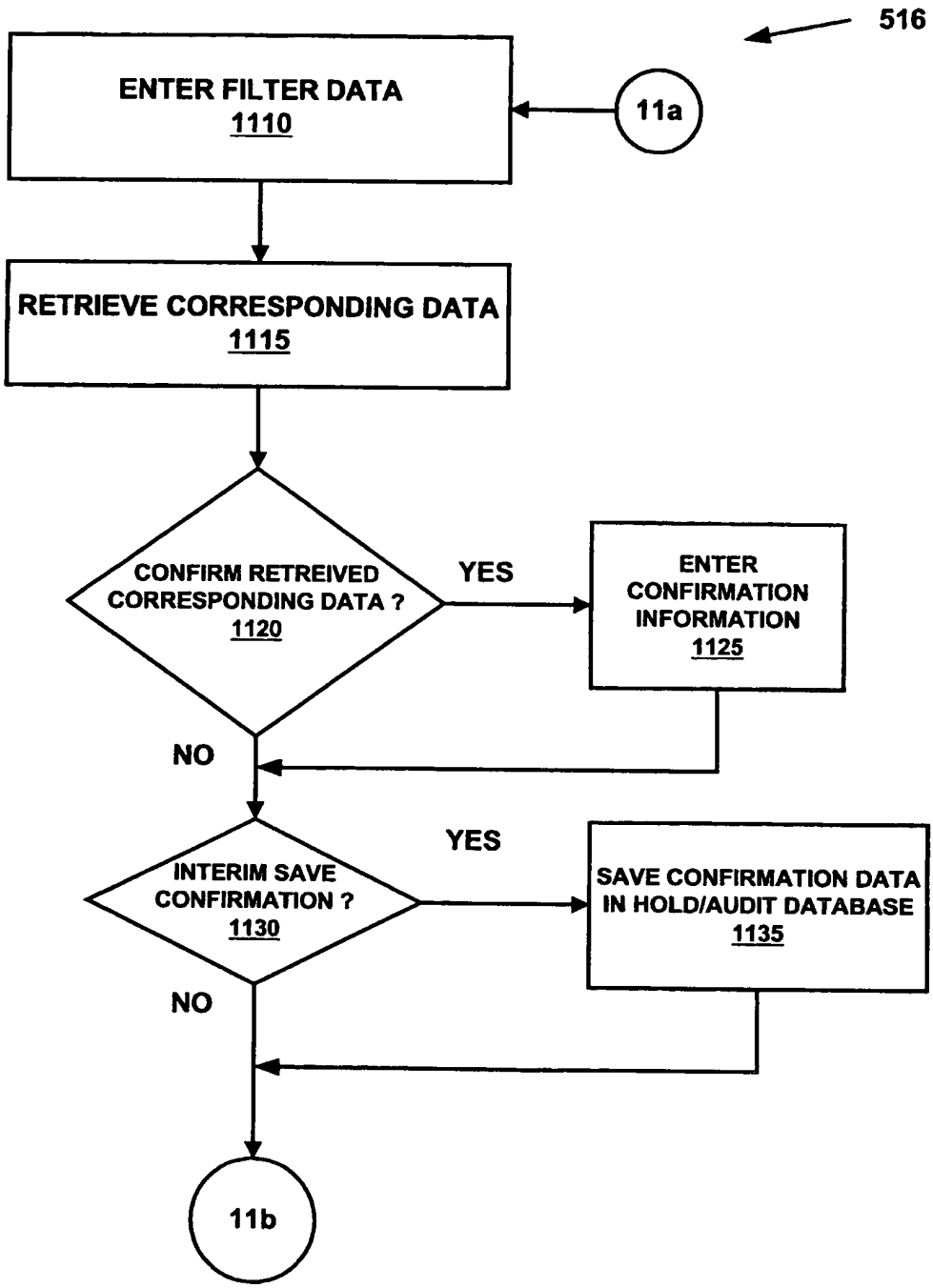
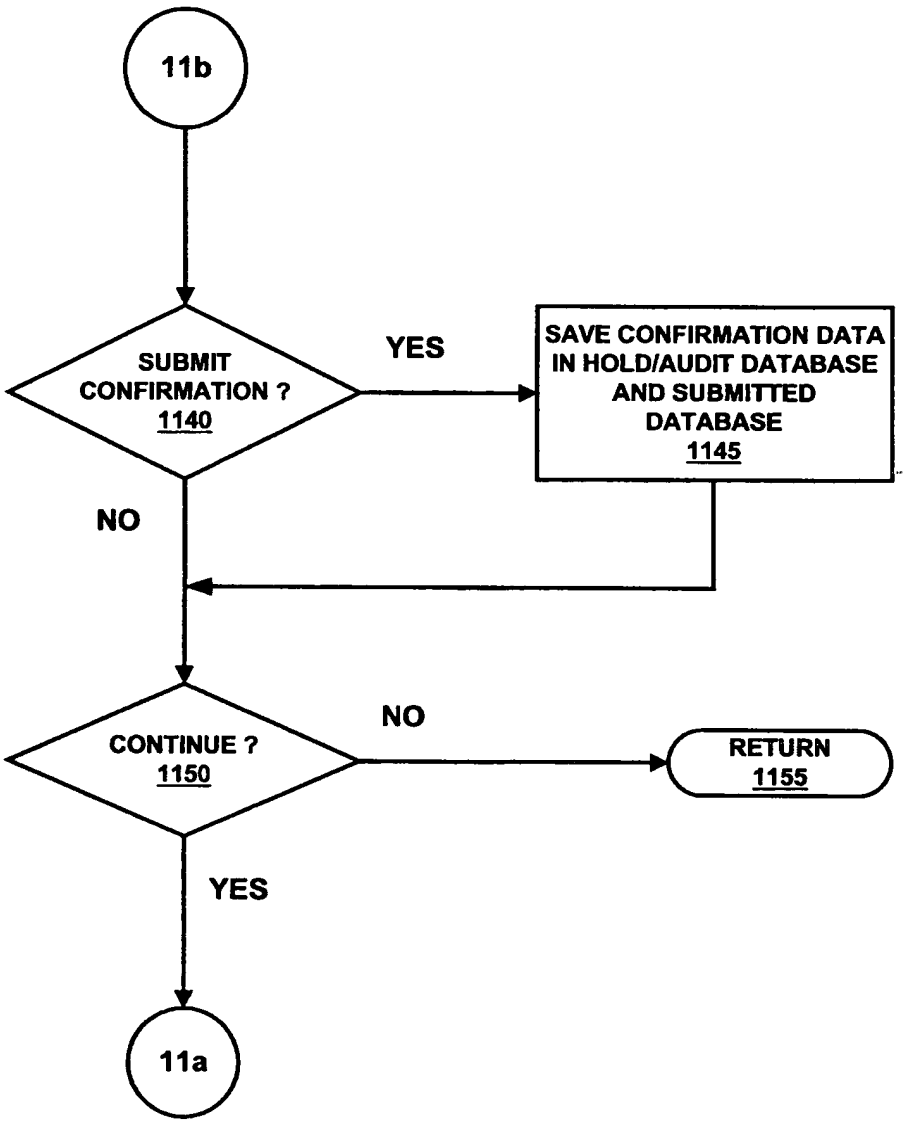

516
ENTER FILTER DATA
1110
11a
RETRIEVE CORRESPONDING DATA
1115
CONFIRM RETREIVED CORRESPONDING DATA ?
1120
YES
ENTER CONFIRMATION INFORMATION
1125
NO
INTERIM SAVE CONFIRMATION ?
1130
YES
SAVE CONFIRMATION DATA IN HOLD/AUDIT DATABASE
1135
NO
11b

FIGURE 11b

516



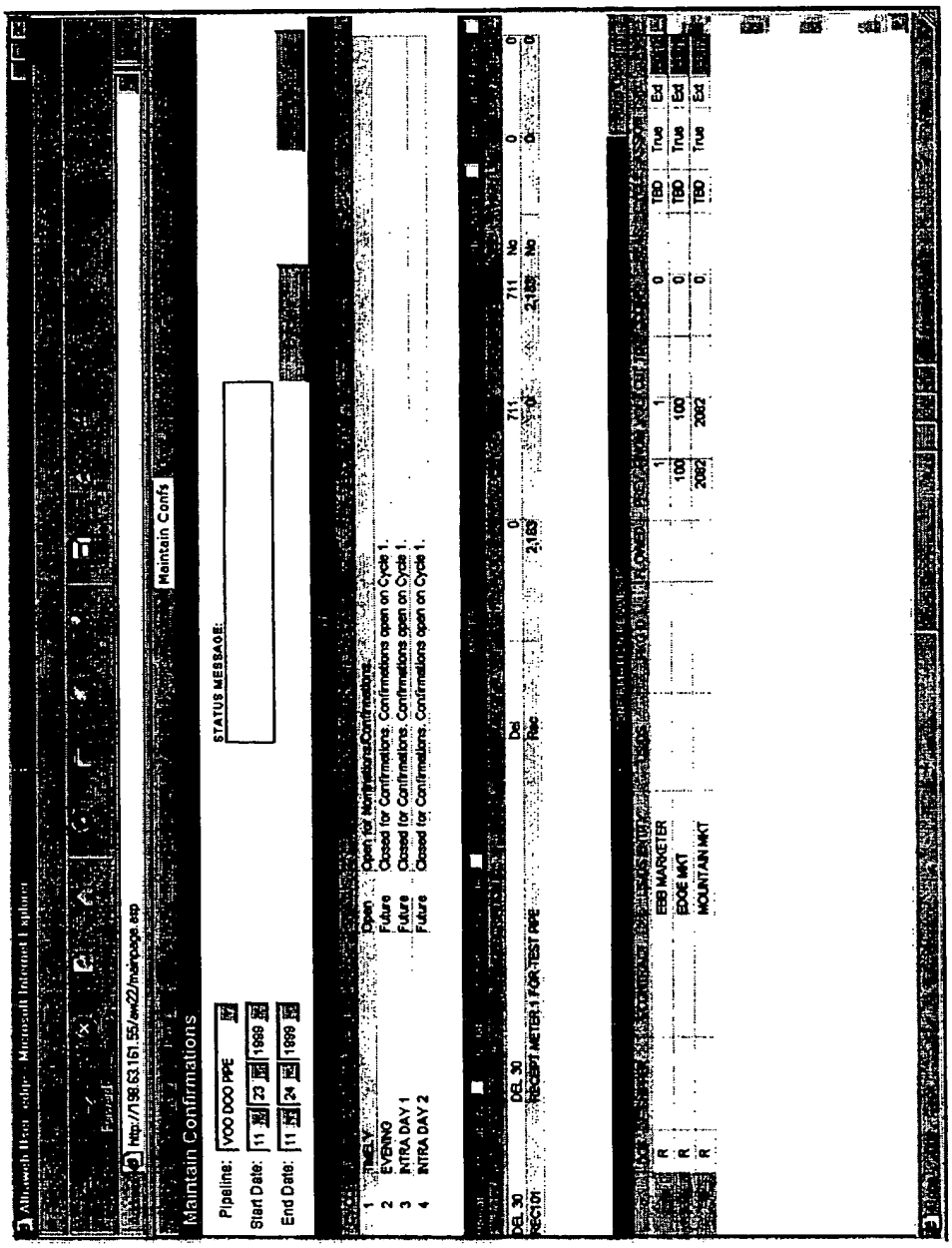

Maintain Confirmations
Pipeline:
YOO DOO PIPE
Start Date:
End Date:
STATUS MESSAGE:
Maintain Confs
Open for Nominations/Confirmations
Closed for Confirmations. Confirmations open on Cycle 1.
Closed for Confirmations. Confirmations open on Cycle 1.
Closed for Confirmations. Confirmations open on Cycle 1.
EVENING
INTRA DAY 1
INTRA DAY 2
RECEIPT METER 1 FOR TEST PIPE
EBB MARKETER
EDGE MKT
MOUNTAIN MKT

FIGURE 11c

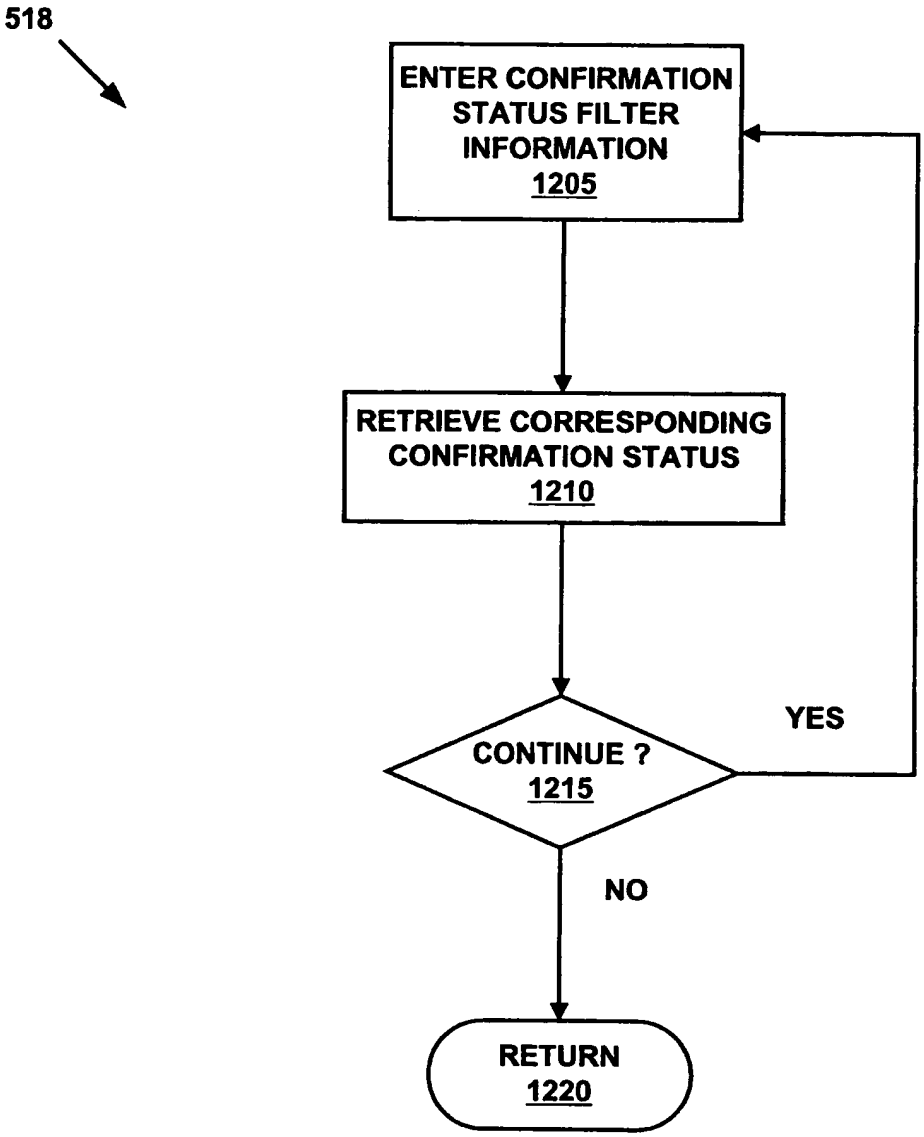

518
ENTER CONFIRMATION STATUS FILTER INFORMATION
1205
RETRIEVE CORRESPONDING CONFIRMATION STATUS
1210
CONTINUE ?
1215
YES
NO
RETURN
1220

FIGURE 12a

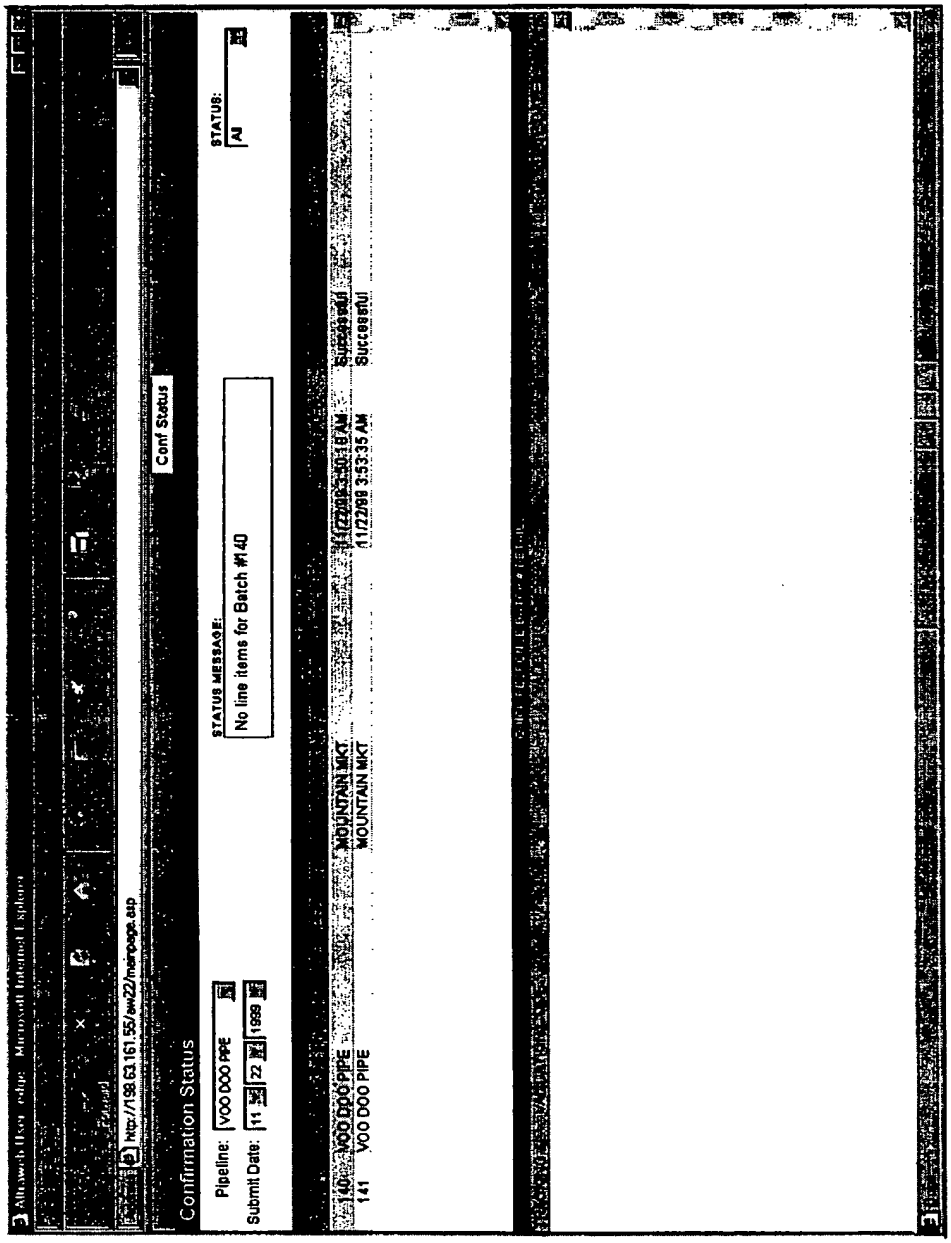
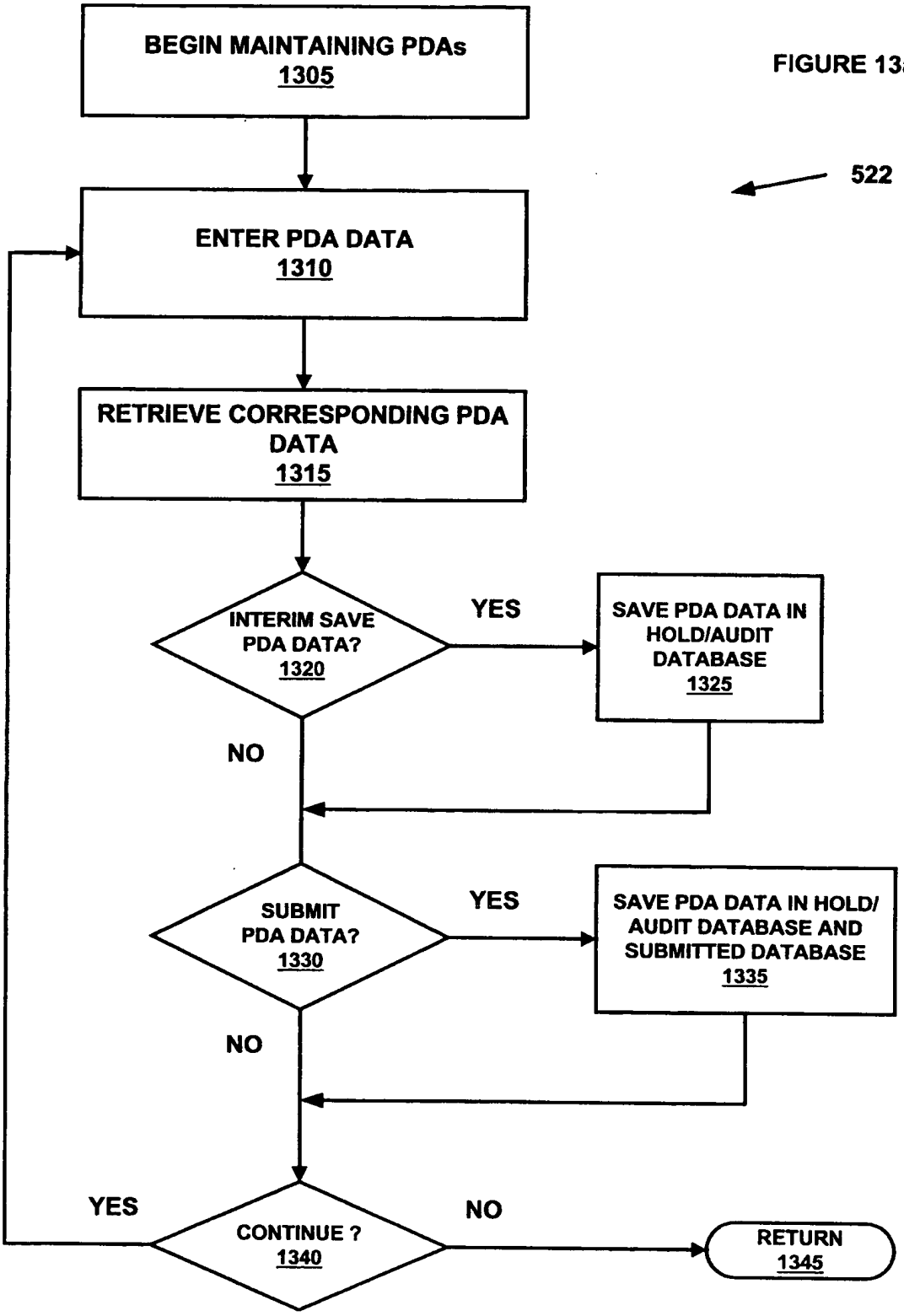

Confirmation Status
Pipeline: VOO DOO PIPE
Submit Date: 11 22 1999
STATUS MESSAGE:
No line items for Batch #140
Conf Status
STATUS:
All
140 VOO DOO PIPE MOUNTAIN MKT 11/22/99 3:53:18 AM Successful
141 VOO DOO PIPE MOUNTAIN MKT 11/22/99 3:53:35 AM Successful

FIGURE 12b

FIGURE 13a


BEGIN MAINTAINING PDAs
1305
522
ENTER PDA DATA
1310
RETRIEVE CORRESPONDING PDA DATA
1315
INTERIM SAVE PDA DATA?
1320
YES
SAVE PDA DATA IN HOLD/AUDIT DATABASE
1325
NO
SUBMIT PDA DATA?
1330
YES
SAVE PDA DATA IN HOLD/ AUDIT DATABASE AND SUBMITTED DATABASE
1335
NO
YES
CONTINUE ?
1340
NO
RETURN
1345

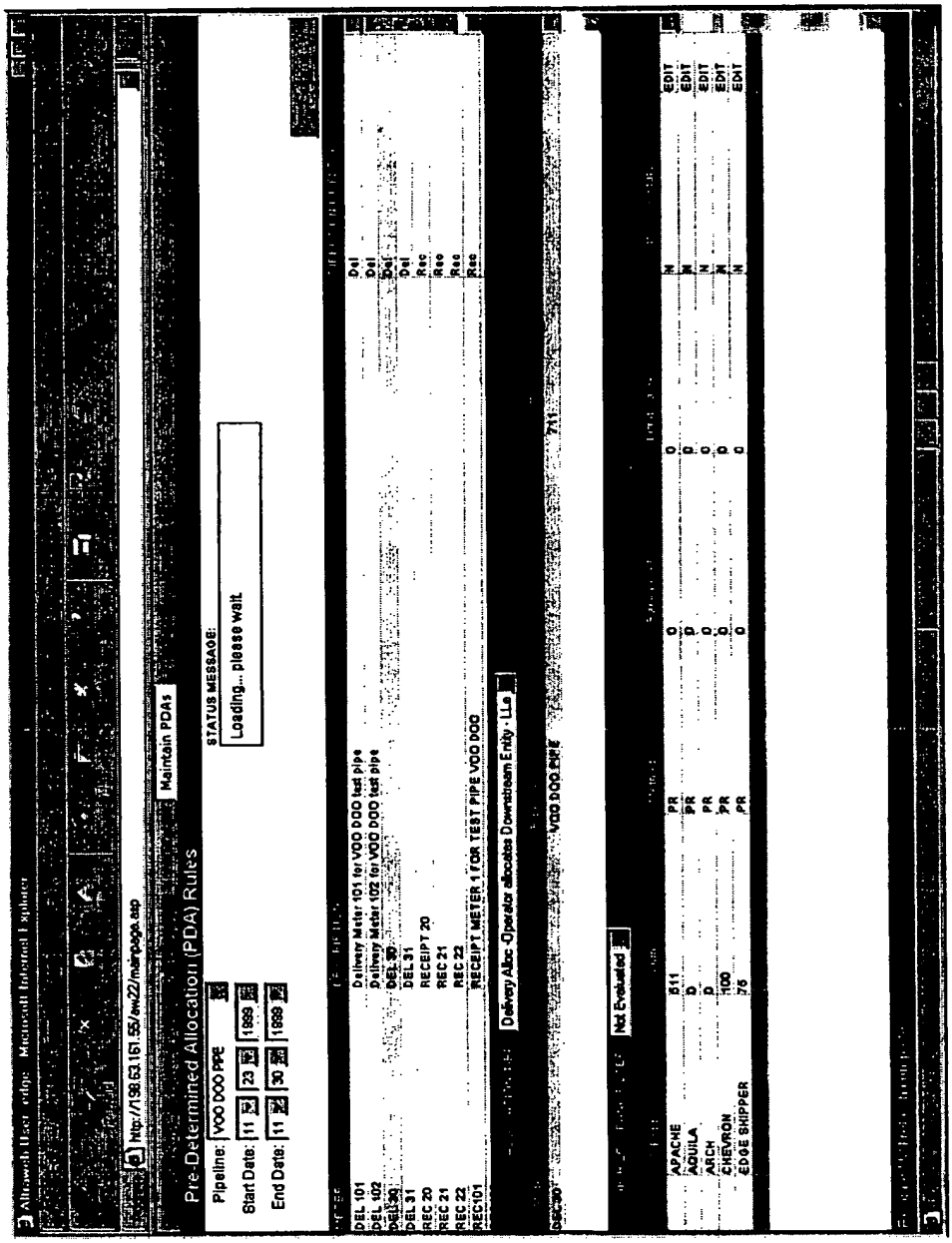

Pre-Determined Allocation (PDA) Rules
Maintain PDAs
Pipeline:
VOO DOO PPE
Start Date:
End Date:
STATUS MESSAGE:
Loading... please wait
Delivery Alloc -Operator allocates Downstream Entity - LLs
Not Evaluated
APACHE
AQUILA
ARCH
CHEVRON
EDGE SHIPPER
EDIT

FIGURE13b

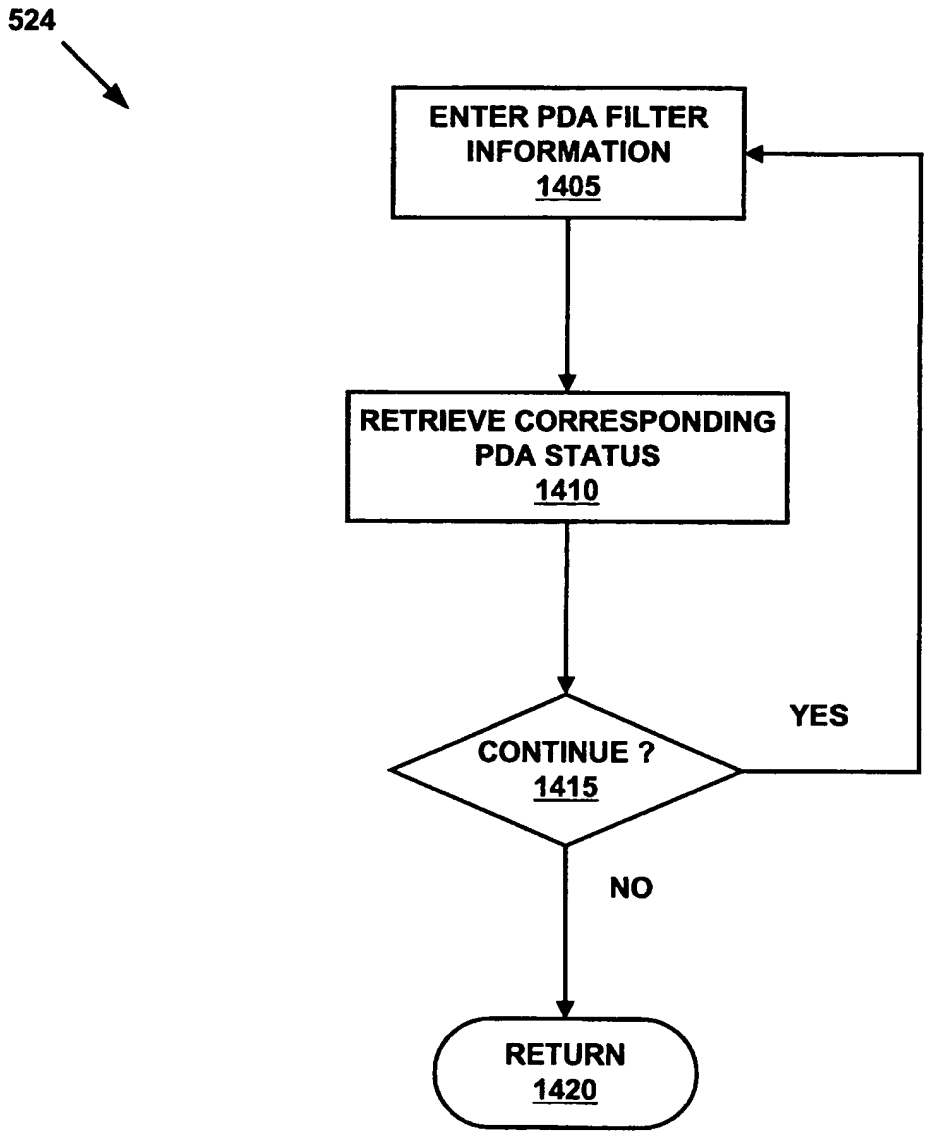

524
ENTER PDA FILTER INFORMATION
1405
RETRIEVE CORRESPONDING PDA STATUS
1410
CONTINUE ?
1415
YES
NO
RETURN
1420

FIGURE 14a

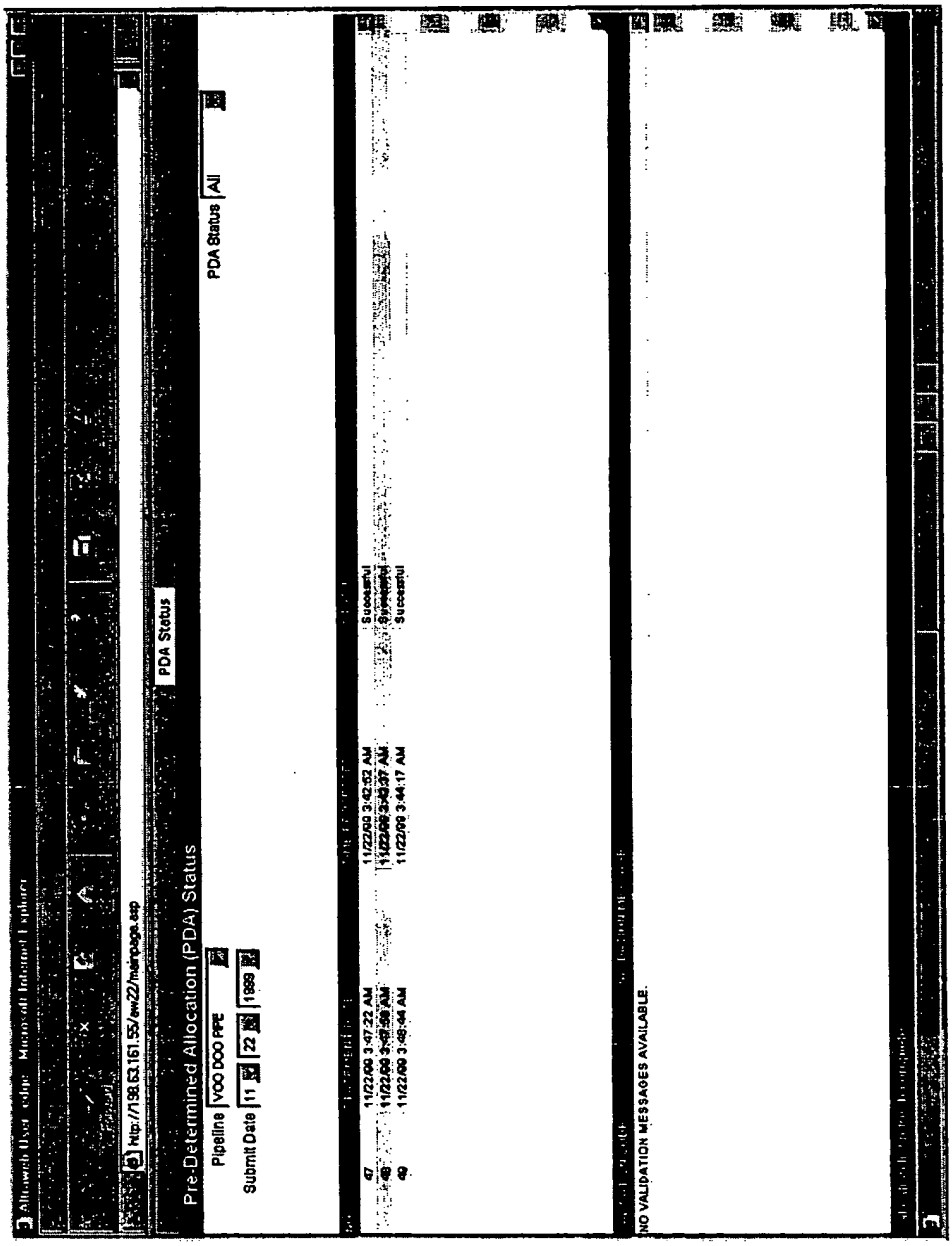

Pre-Determined Allocation (PDA) Status
Pipeline
VOO DOO PPE
Submit Date
11
22
1999
PDA Status
All
PDA Status
11/22/00 3:47:22 AM
11/22/00 3:44:17 AM
Successful
NO VALIDATION MESSAGES AVAILABLE.

FIGURE 14b

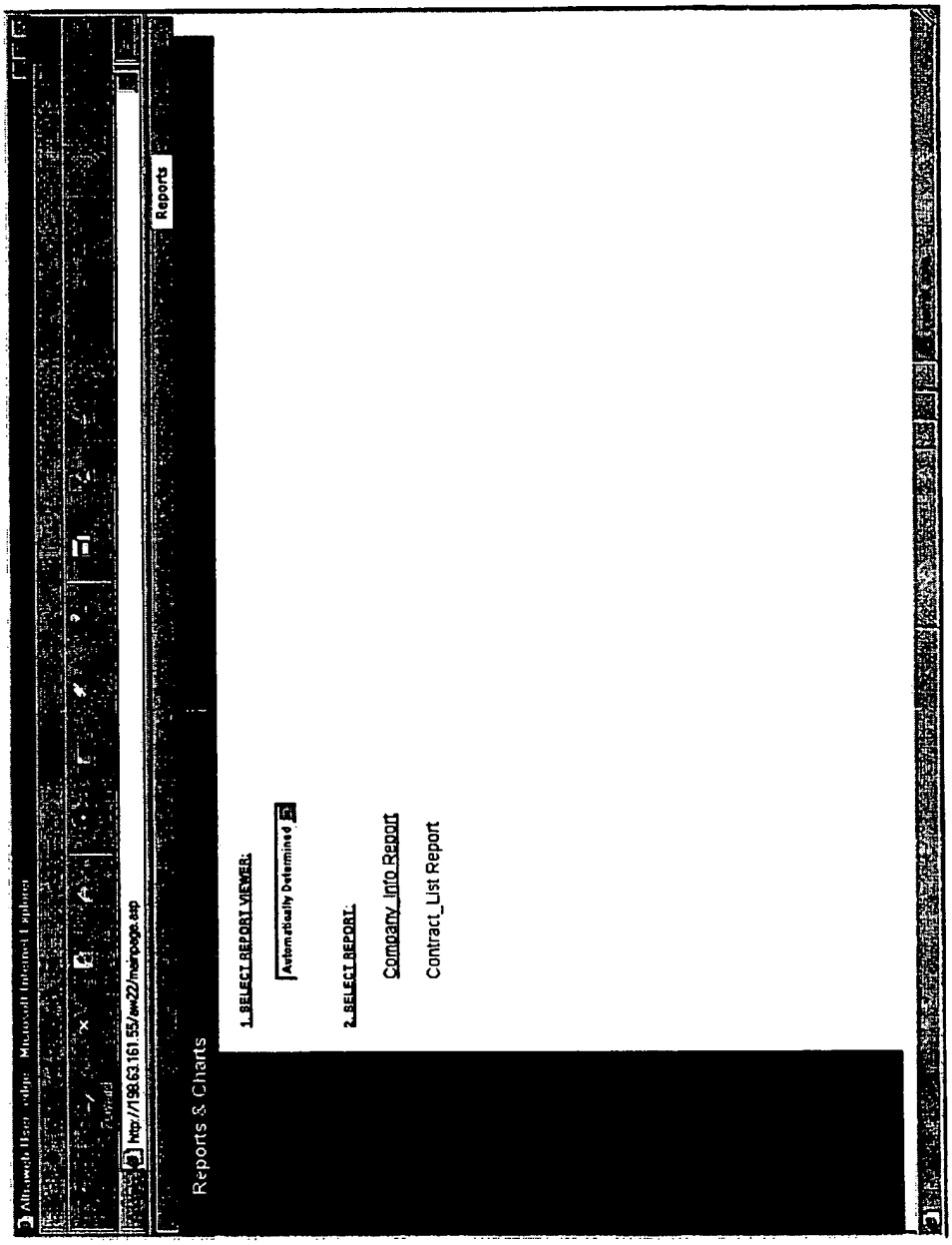

http://198.63.161.55/ew22/mainpage.asp
Reports
Reports & Charts
1. SELECT REPORT VIEWER:
Automatically Determined
2. SELECT REPORT:
Company_Info Report
Contract_List Report

FIGURE 15

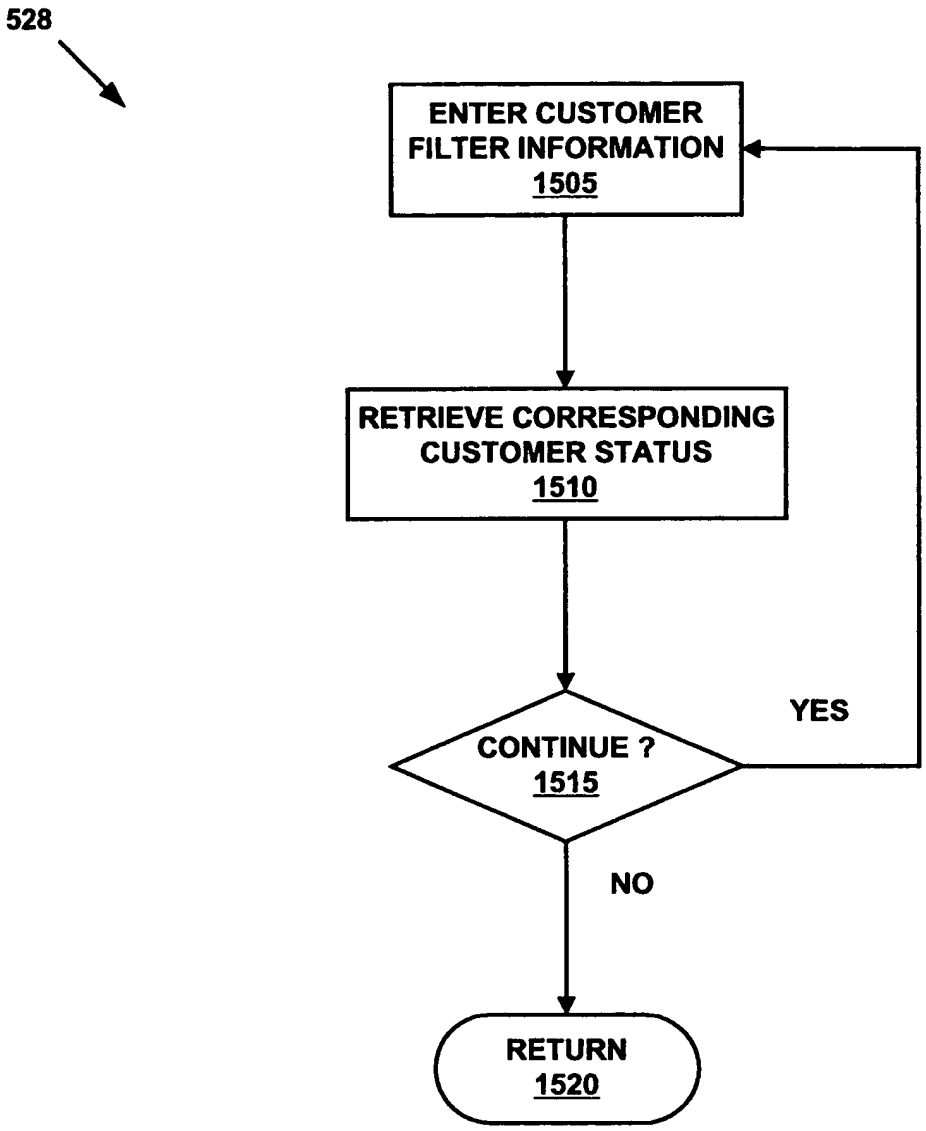

528
ENTER CUSTOMER FILTER INFORMATION 1505
RETRIEVE CORRESPONDING CUSTOMER STATUS 1510
CONTINUE ? 1515
YES
NO
RETURN 1520

FIGURE 15a

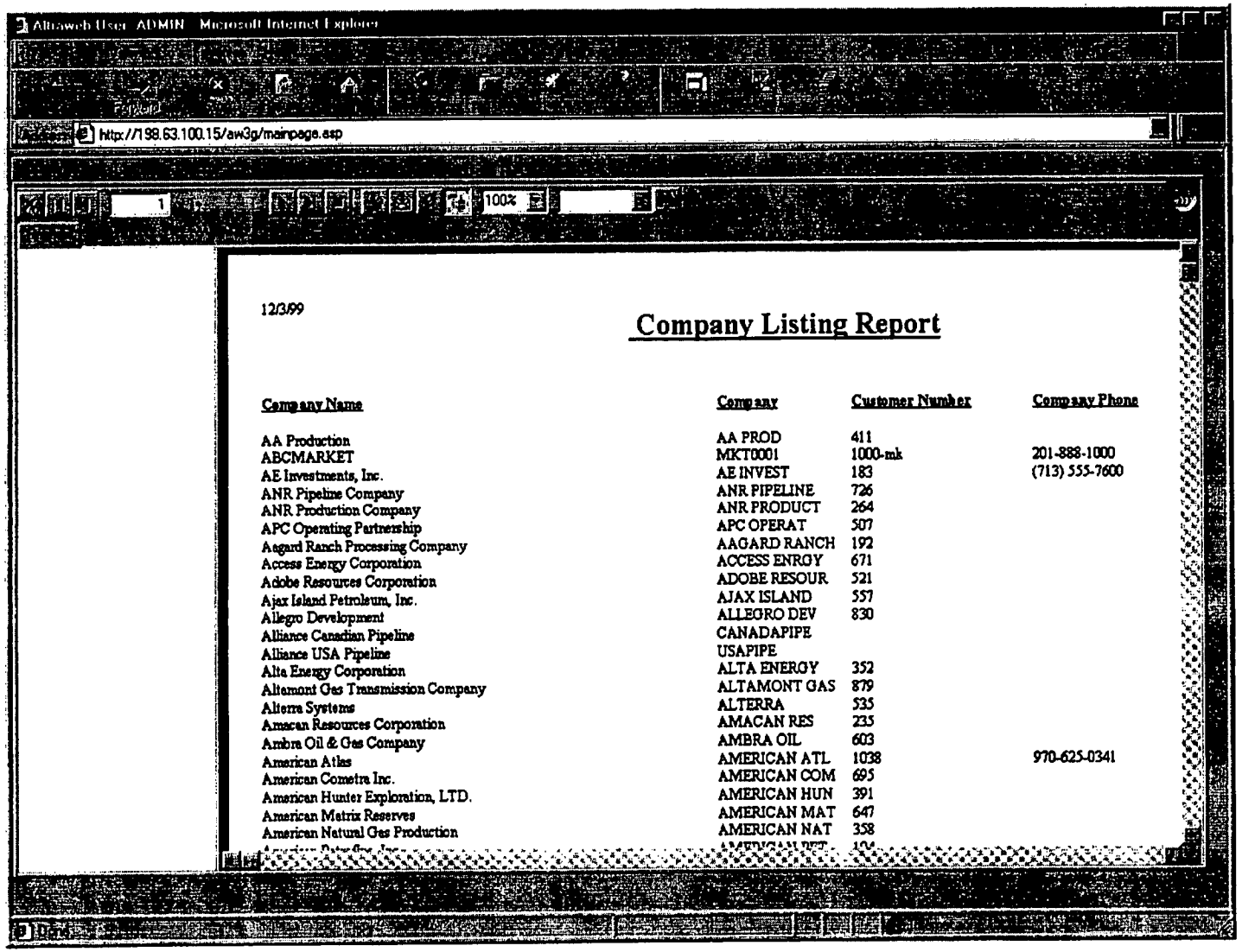


FIGURE 15b

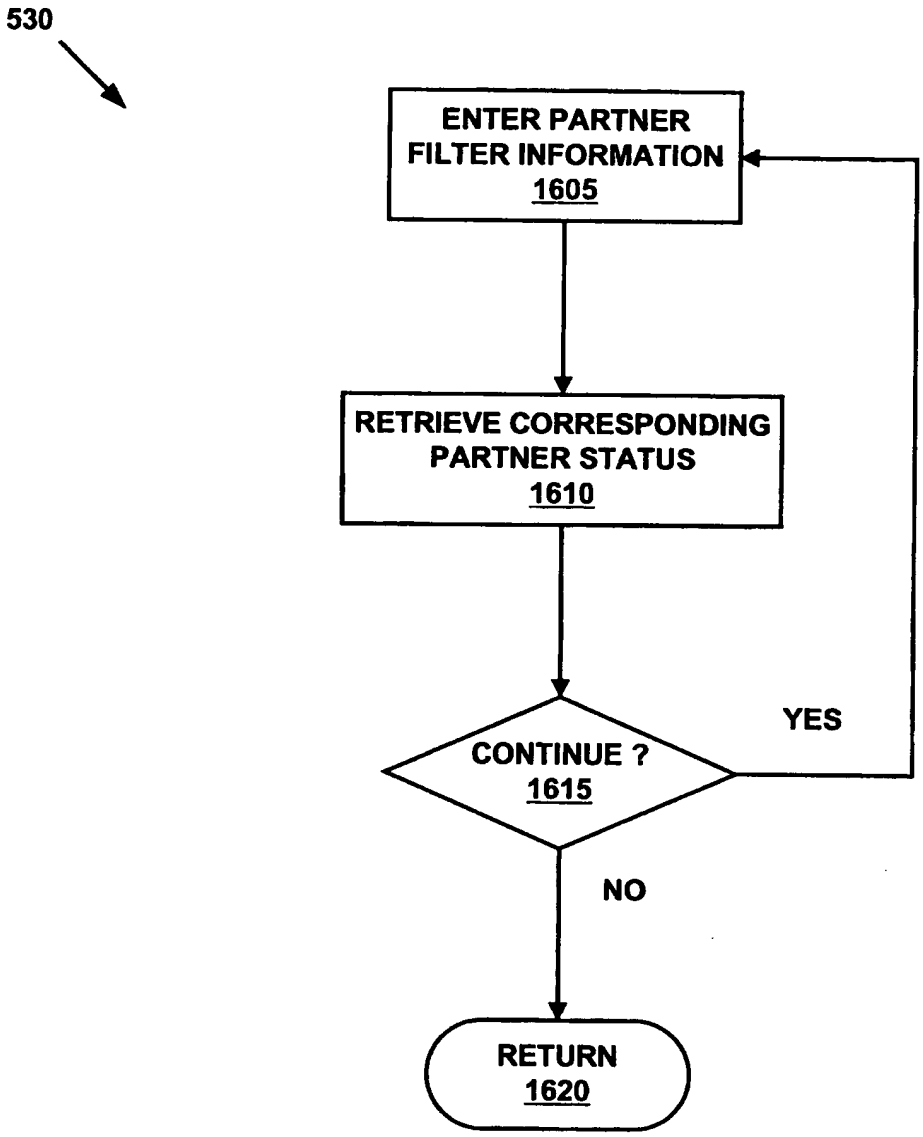
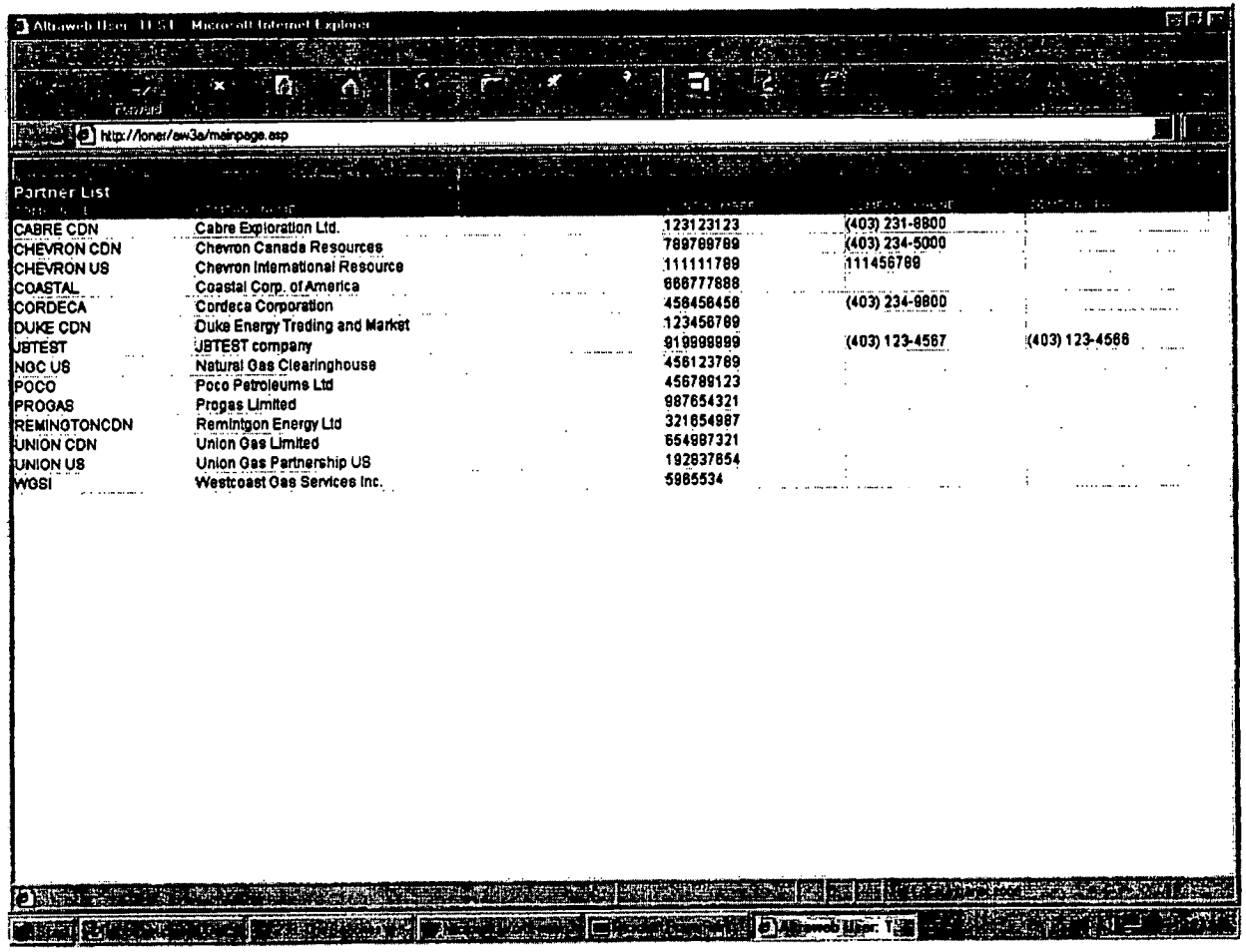

530
ENTER PARTNER FILTER INFORMATION 1605
RETRIEVE CORRESPONDING PARTNER STATUS 1610
CONTINUE ? 1615
YES
NO
RETURN 1620

FIGURE 16a



CABRE CDN	Cabre Exploration Ltd.	123123123	(403) 231-9800	
CHEVRON CDN	Chevron Canada Resources	789789789	(403) 234-5000	
CHEVRON US	Chevron International Resource	111111789	111456789	
COASTAL	Coastal Corp. of America	666777888		
CORDECA	Cordeca Corporation	458456456	(403) 234-9800	
DUKE CDN	Duke Energy Trading and Market	123456789		
JBTEST	JBTEST company	919999999	(403) 123-4567	(403) 123-4566
NGC US	Natural Gas Clearinghouse	456123789		
POCO	Poco Petroleums Ltd	456789123		
PROGAS	Progas Limited	987654321		
REMINGTONCDN	Remington Energy Ltd	321654987		
UNION CDN	Union Gas Limited	654987321		
UNION US	Union Gas Partnership US	192837654		
WGSI	Westcoast Gas Services Inc.	5985534		

FIGURE 16b

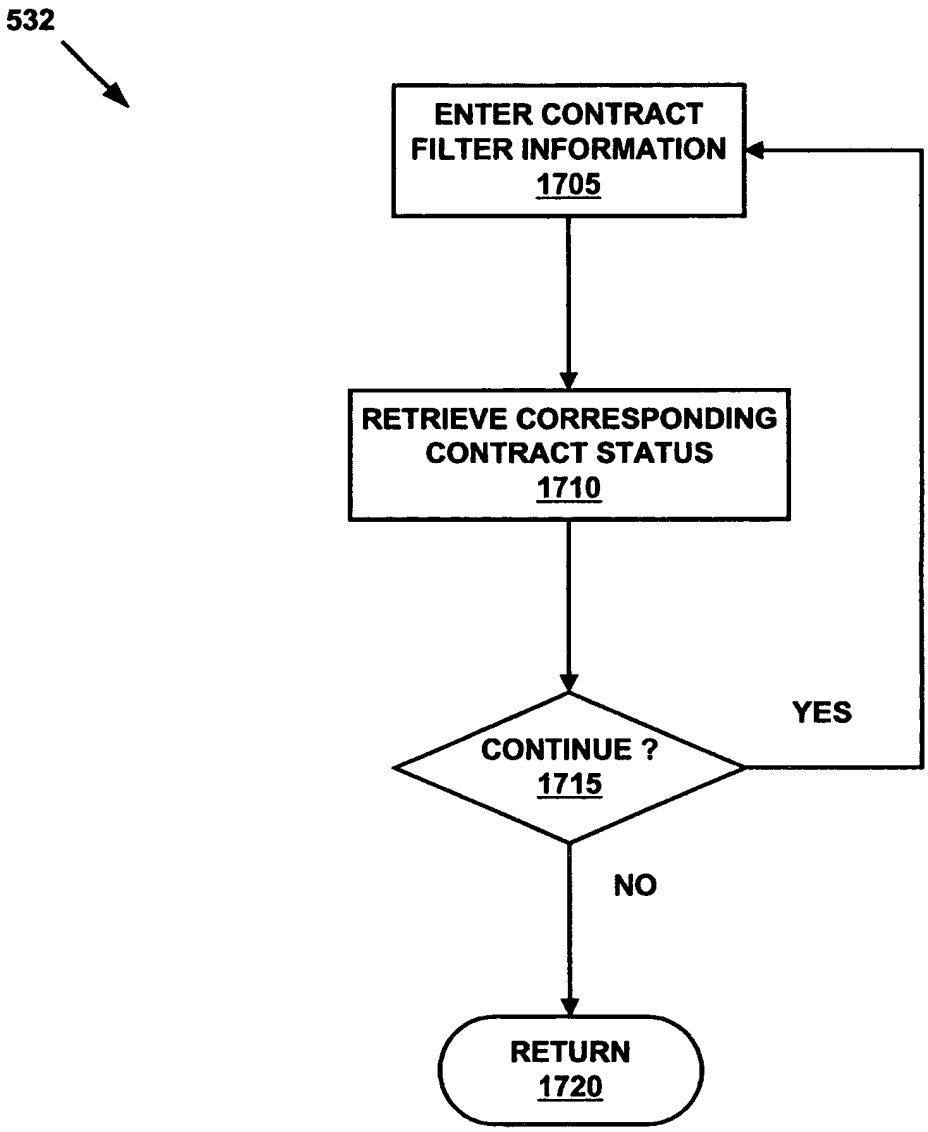

532
ENTER CONTRACT FILTER INFORMATION 1705
RETRIEVE CORRESPONDING CONTRACT STATUS 1710
CONTINUE ? 1715
YES
NO
RETURN 1720

FIGURE 17a

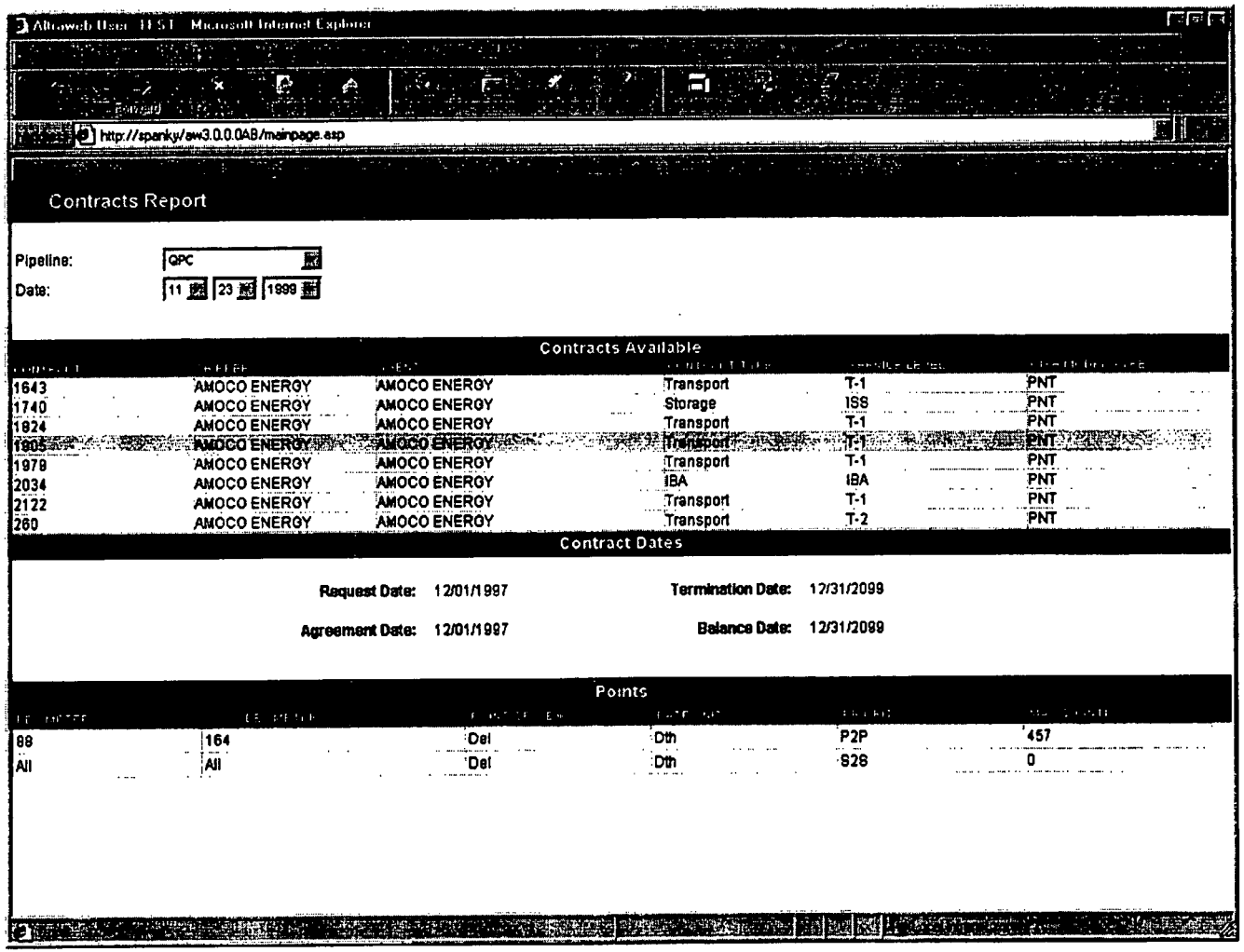


FIGURE 17b

Gowling Lafleur Henderson LLP

CA 02328595 2000-12-18

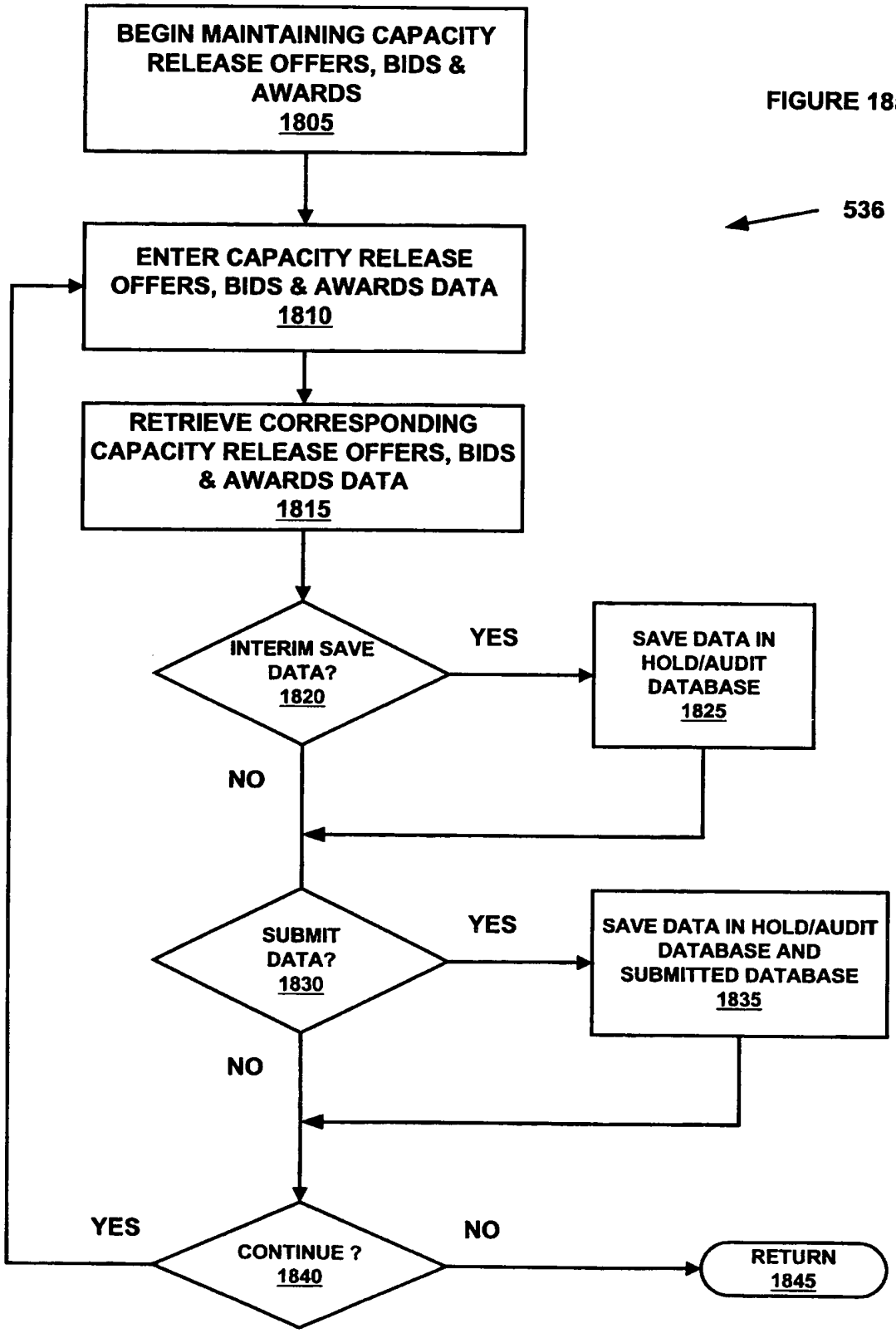


FIGURE 18a

Gowling Lafleur Henderson LLP

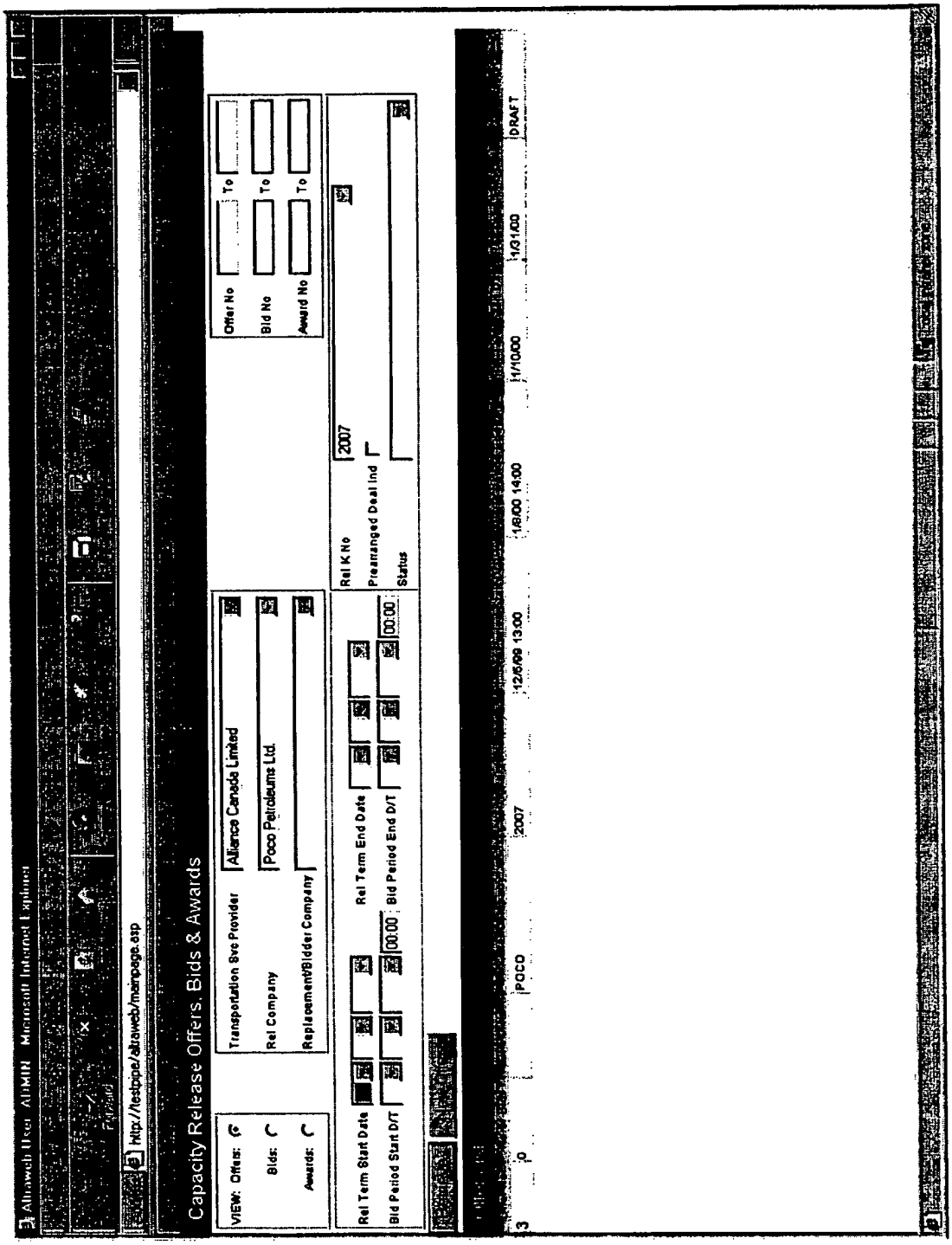


FIGURE 18b

Gowling Lafleur Henderson LLP

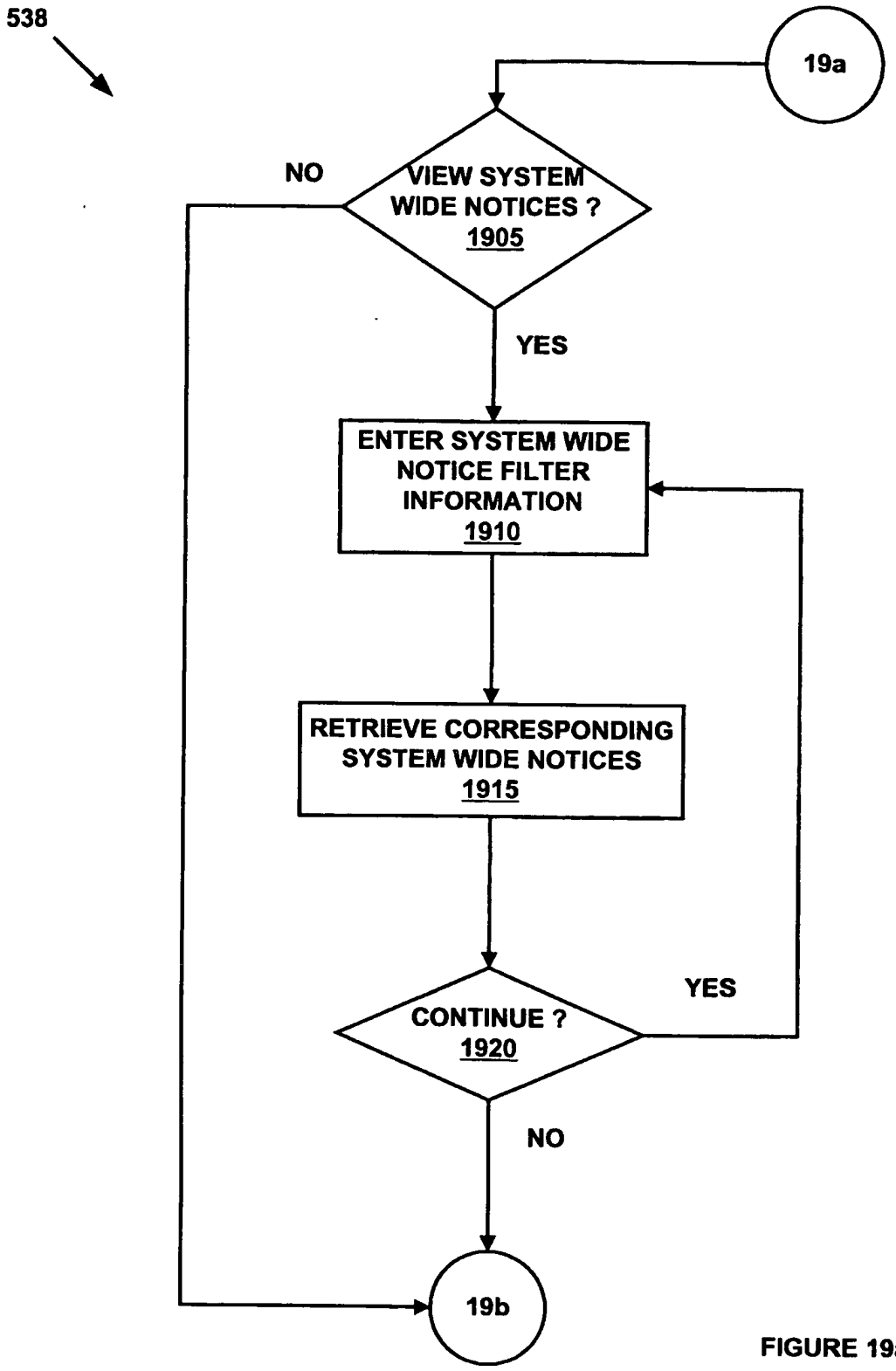

538
19a
VIEW SYSTEM WIDE NOTICES ?
1905
NO
YES
ENTER SYSTEM WIDE NOTICE FILTER INFORMATION
1910
RETRIEVE CORRESPONDING SYSTEM WIDE NOTICES
1915
CONTINUE ?
1920
YES
NO
19b

FIGURE 19a

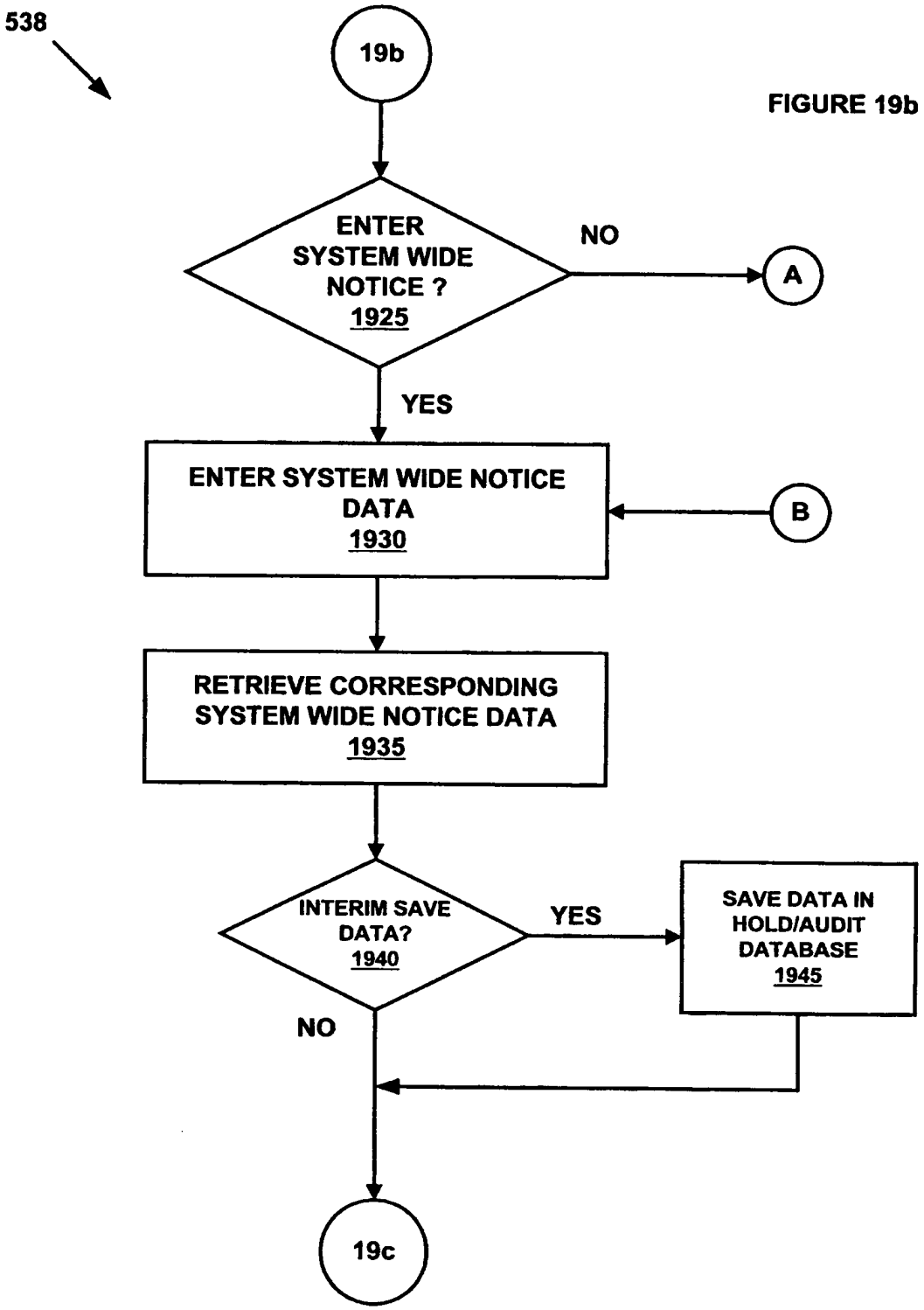

538
19b
ENTER SYSTEM WIDE NOTICE ? 1925
NO
A
YES
ENTER SYSTEM WIDE NOTICE DATA 1930
B
RETRIEVE CORRESPONDING SYSTEM WIDE NOTICE DATA 1935
INTERIM SAVE DATA? 1940
YES
SAVE DATA IN HOLD/AUDIT DATABASE 1945
NO
19c

FIGURE 19b

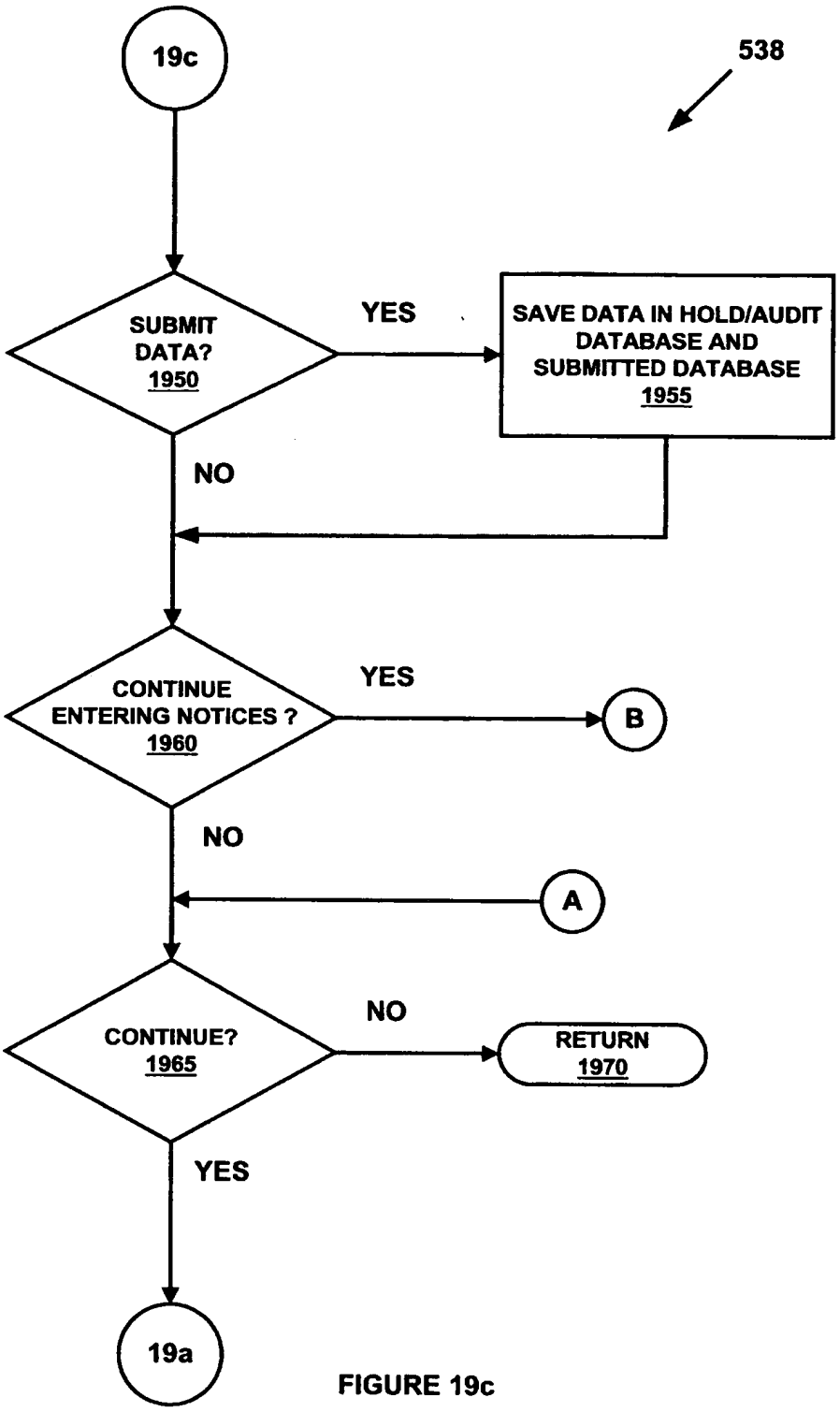

19c
538
SUBMIT DATA? 1950
YES
SAVE DATA IN HOLD/AUDIT DATABASE AND SUBMITTED DATABASE 1955
NO
CONTINUE ENTERING NOTICES ? 1960
YES
B
NO
A
CONTINUE? 1965
NO
RETURN 1970
YES
19a

FIGURE 19c

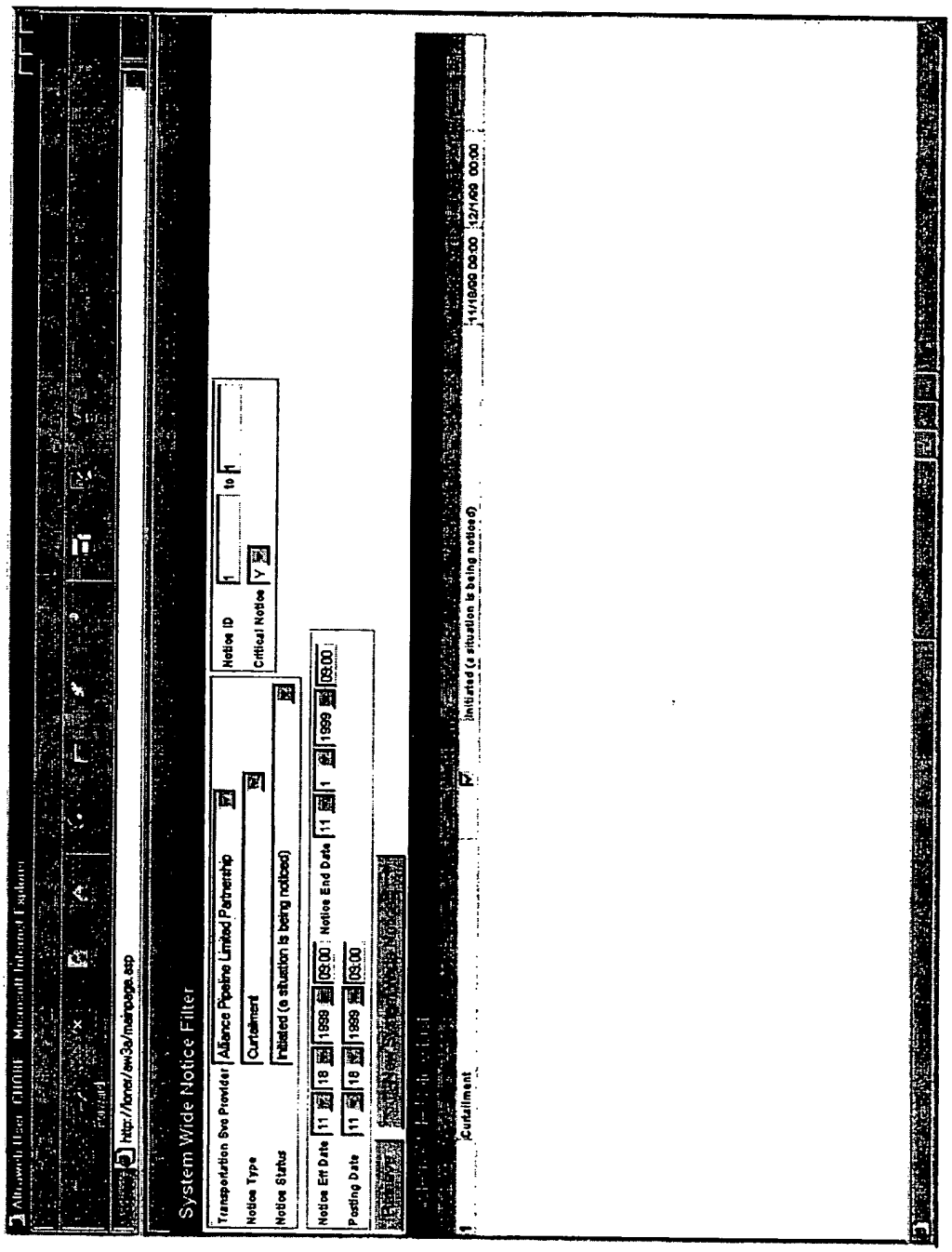

http://tonei/sw3a/mainpage.asp
System Wide Notice Filter
Transportation Svc Provider
Alliance Pipeline Limited Partnership
Notice Type
Curtailment
Notice Status
Initiated (a situation is being noticed)
Notice ID
to
Critical Notice
Notice Eff Date
Notice End Date
Posting Date
1999
09:00
Curtailment
Initiated (a situation is being noticed)
11/18/99 09:00 12/1/99 09:00

FIGURE 19d

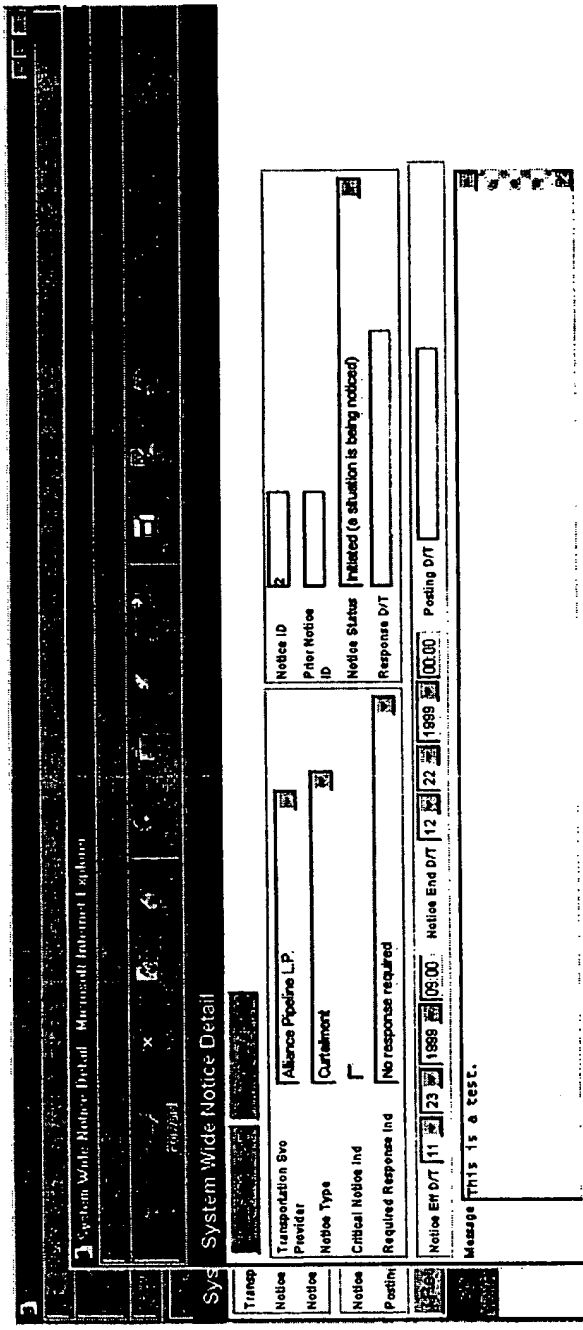

System Wide Notice Detail
Transp
Notice
Notice
Notice
Postin
Transportation Svc Provider
Alliance Pipeline L.P.
Notice Type
Curtailment
Critical Notice Ind
Required Response Ind
No response required
Notice ID
2
Prior Notice ID
Notice Status
Initiated (a situation is being noticed)
Response D/T
Notice Eff D/T
11
23
1999
09:00
Notice End D/T
12
22
1999
00:00
Posting D/T
Message
this is a test.

FIGURE 19e

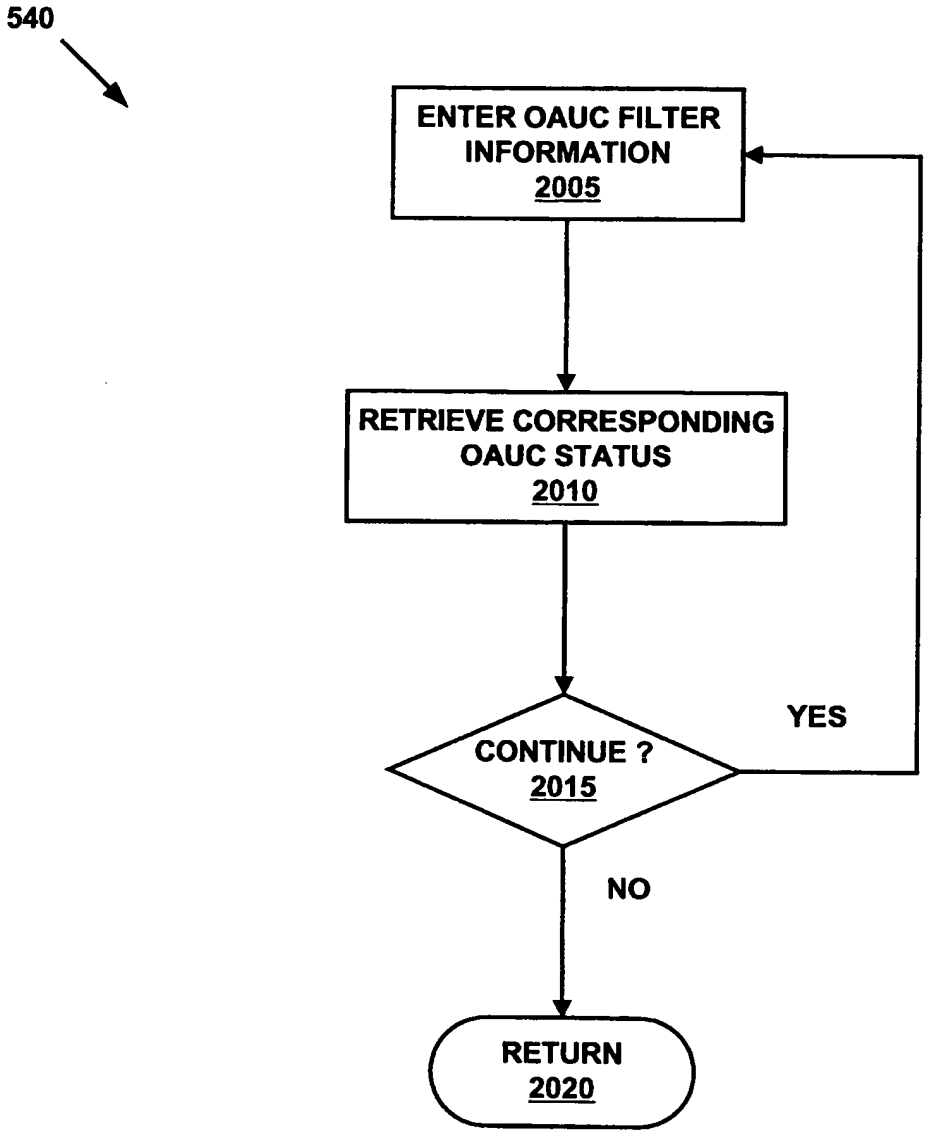

540
ENTER OAUC FILTER INFORMATION
2005
RETRIEVE CORRESPONDING OAUC STATUS
2010
CONTINUE ?
2015
YES
NO
RETURN
2020

FIGURE 20a

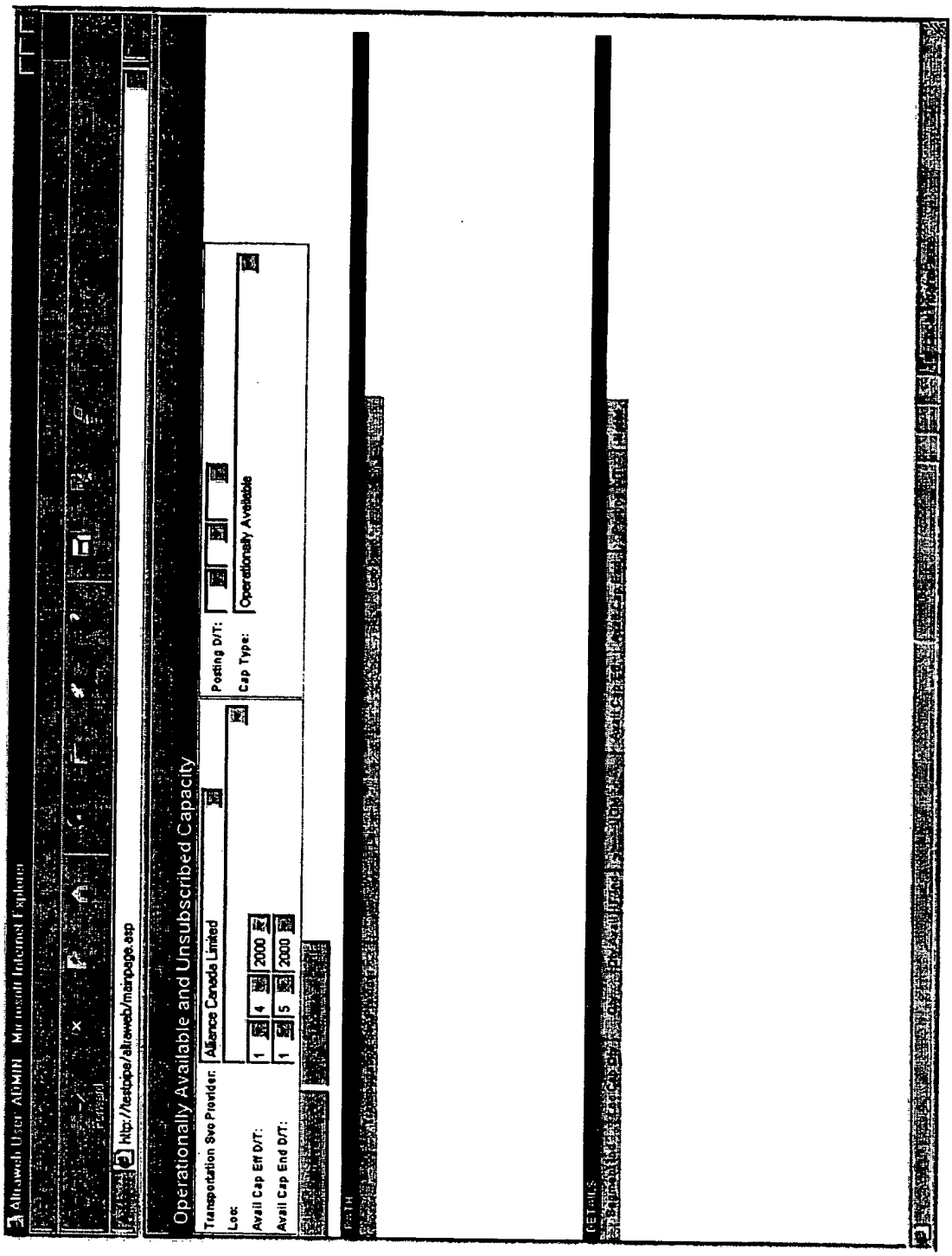

Altaweb User: ADMIN Microsoft Internet Explorer
http://testapp/altaweb/mainpage.asp
Operationally Available and Unsubscribed Capacity
Transportation Svc Provider:
Alliance Canada Limited
Loc:
Avail Cap Eff D/T:
Avail Cap End D/T:
Posting D/T:
Cap Type:
Operationally Available
PATH
DETAILS

FIGURE 20b

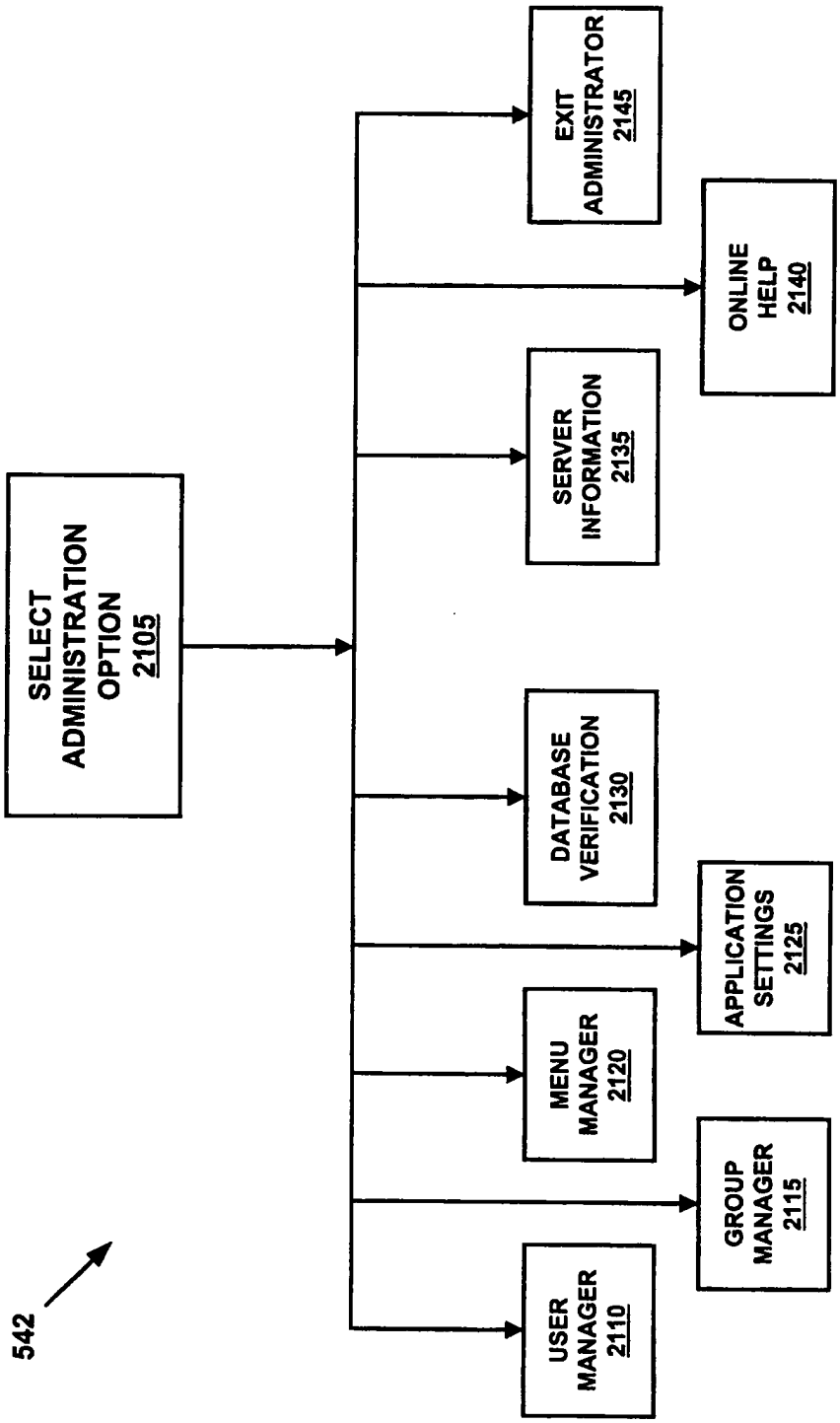

542
SELECT ADMINISTRATION OPTION 2105
USER MANAGER 2110
GROUP MANAGER 2115
MENU MANAGER 2120
APPLICATION SETTINGS 2125
DATABASE VERIFICATION 2130
SERVER INFORMATION 2135
ONLINE HELP 2140
EXIT ADMINISTRATOR 2145

FIGURE 21a

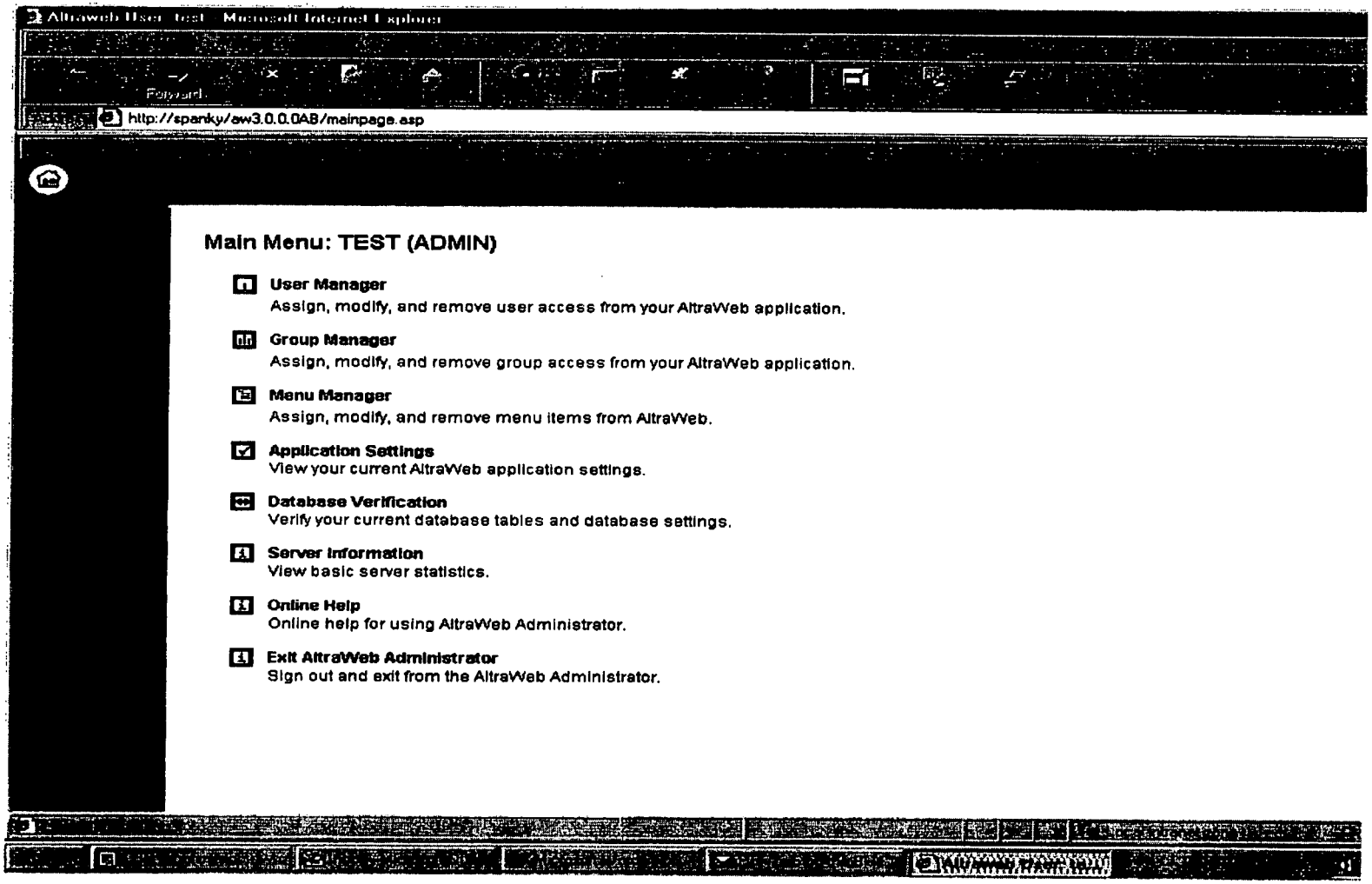


FIGURE 21b

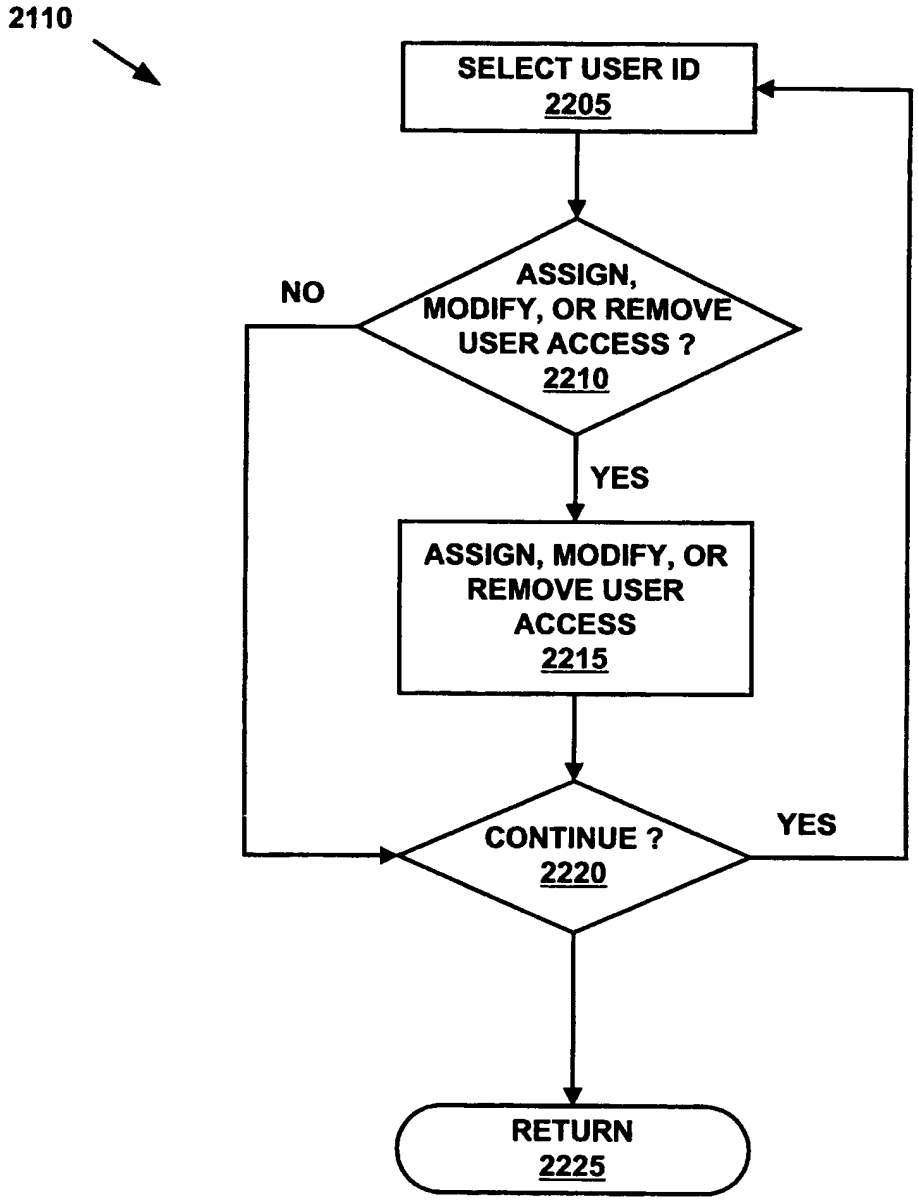

2110
SELECT USER ID
2205
ASSIGN, MODIFY, OR REMOVE USER ACCESS ?
2210
NO
YES
ASSIGN, MODIFY, OR REMOVE USER ACCESS
2215
CONTINUE ?
2220
YES
RETURN
2225

FIGURE 22a

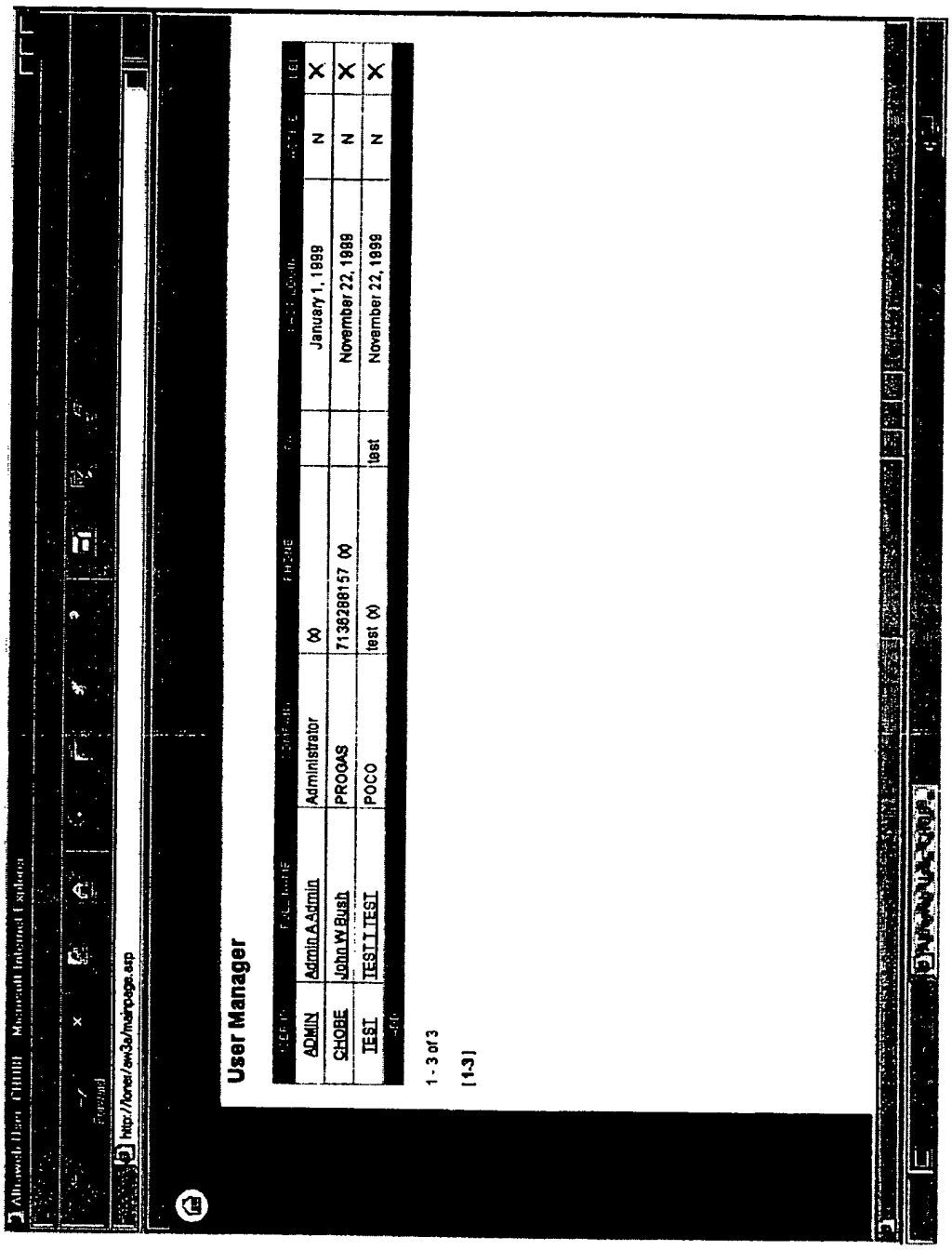

User Manager
ADMIN
Admin A Admin
Administrator
(X)
January 1, 1999
N
CHOBE
John W Bush
PROGAS
7136288157 (X)
November 22, 1999
N
TEST
TEST TEST
POCO
test (X)
test
November 22, 1999
N
1 - 3 of 3
[1-3]

FIGURE 22b

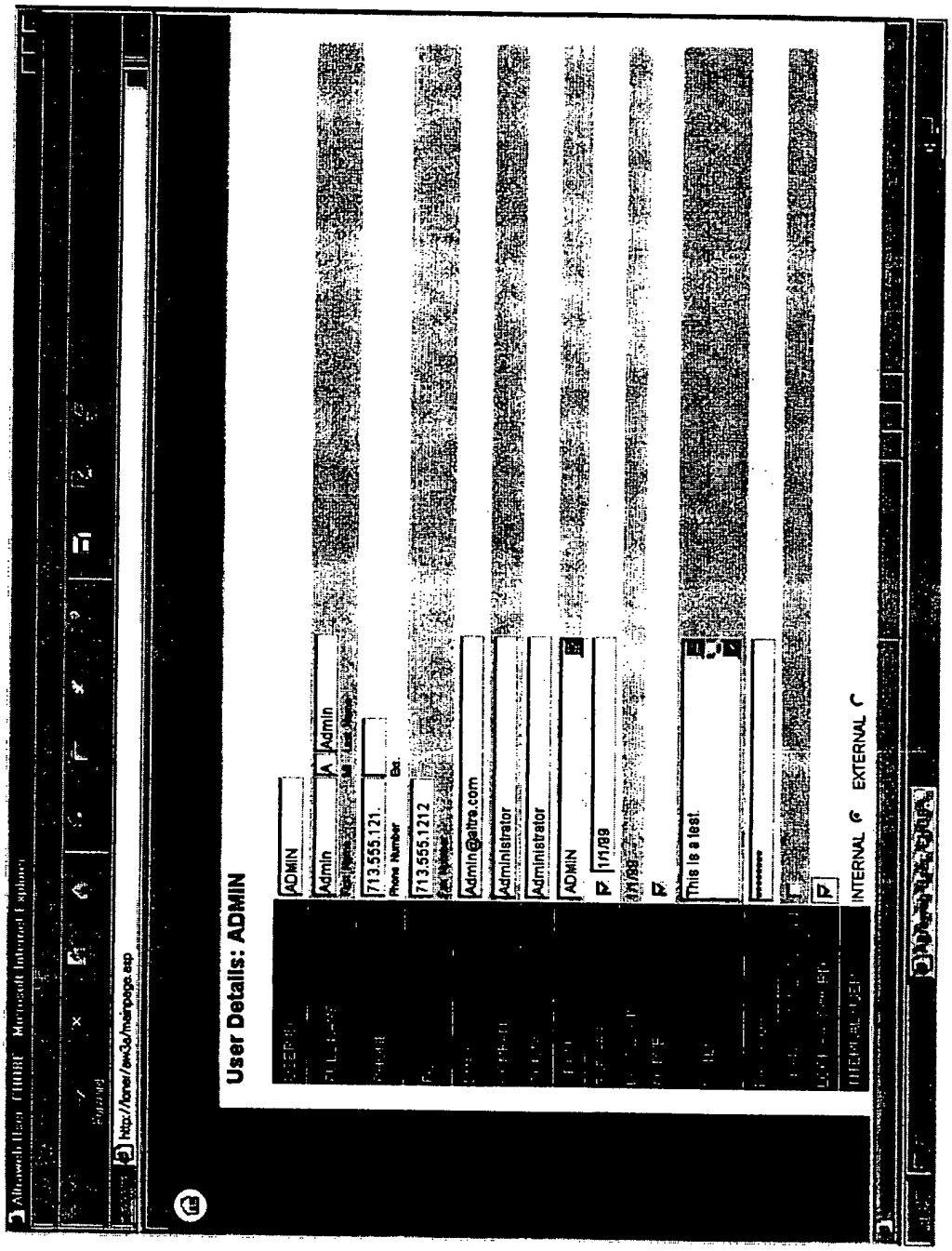

User Details: ADMIN
ADMIN
Admin
Admin
713.555.121
Phone Number
713.555.1212
Admin@altra.com
Administrator
Administrator
ADMIN
1/1/89
This is a test.
INTERNAL
EXTERNAL

FIGURE 22c

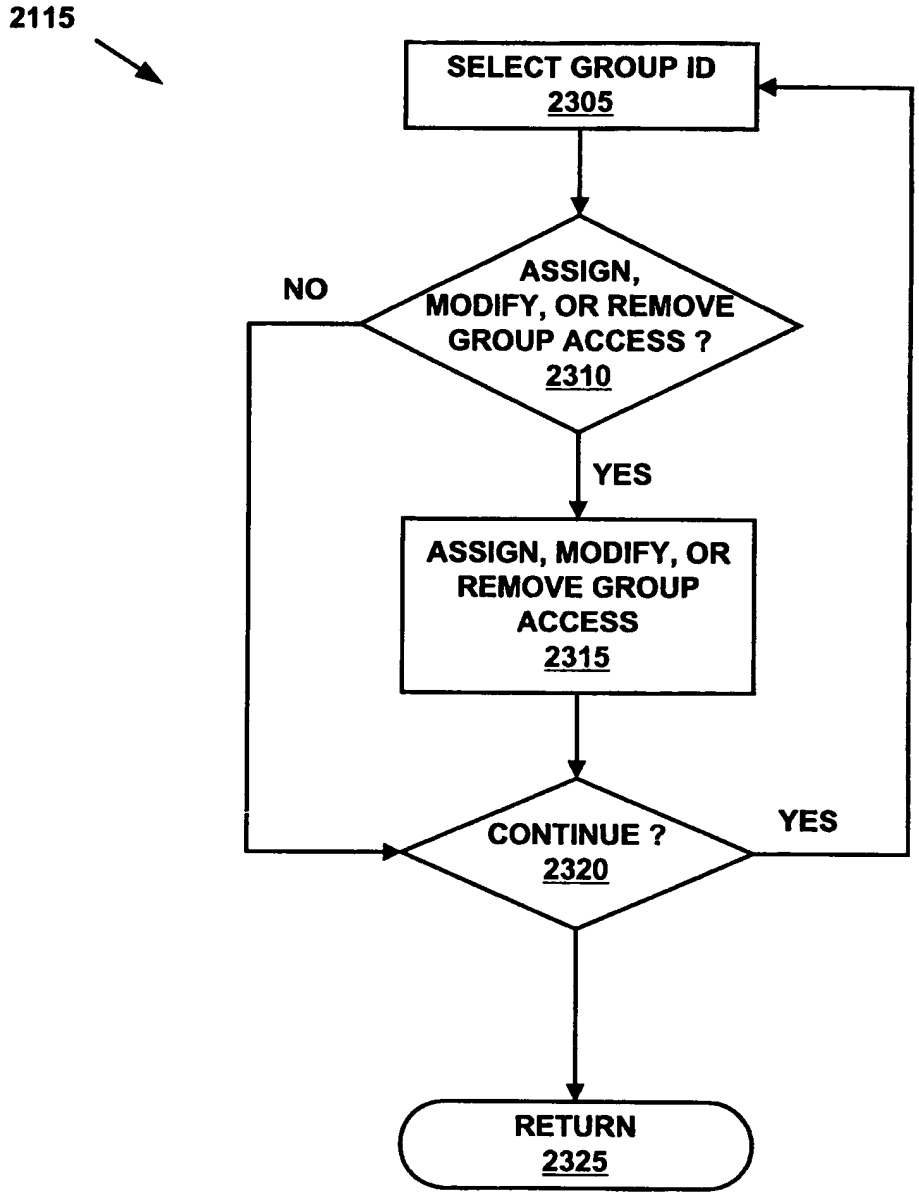

2115
SELECT GROUP ID
2305
ASSIGN, MODIFY, OR REMOVE GROUP ACCESS ?
2310
NO
YES
ASSIGN, MODIFY, OR REMOVE GROUP ACCESS
2315
CONTINUE ?
2320
YES
RETURN
2325

FIGURE 23a

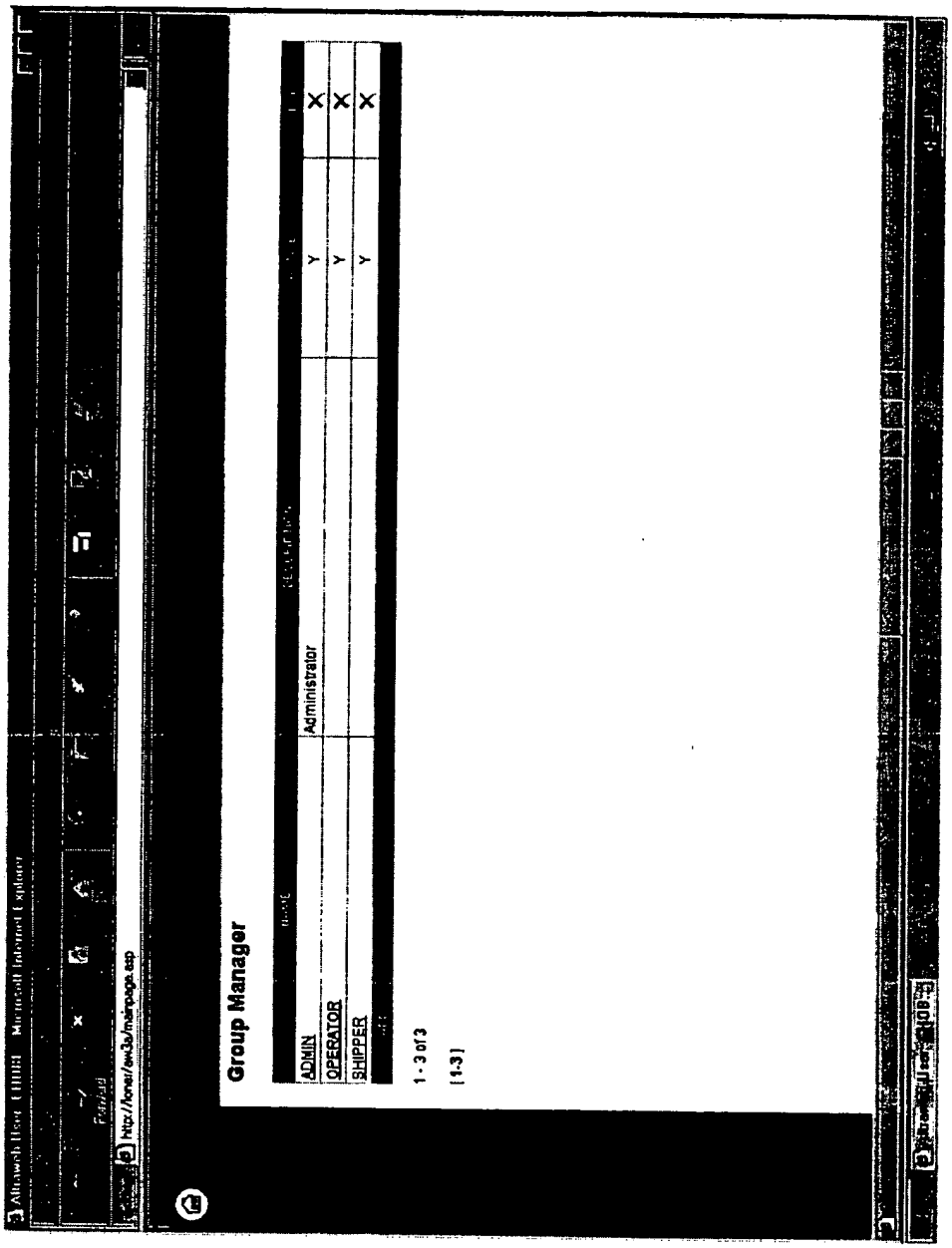

Group Manager
ADMIN
Administrator
Y
X
OPERATOR
Y
X
SHIPPER
Y
X
1 - 3 of 3
[1-3]

FIGURE 23b

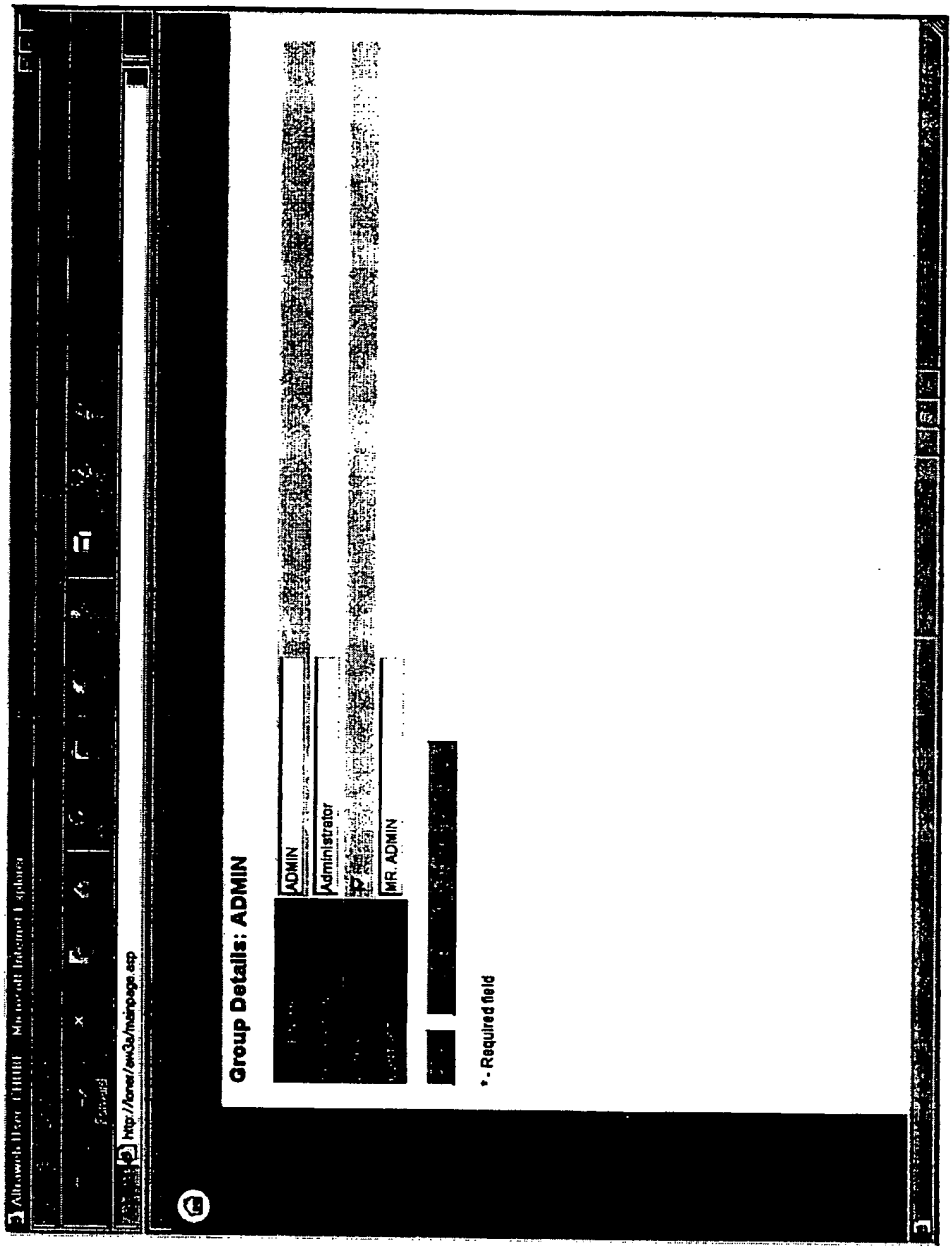
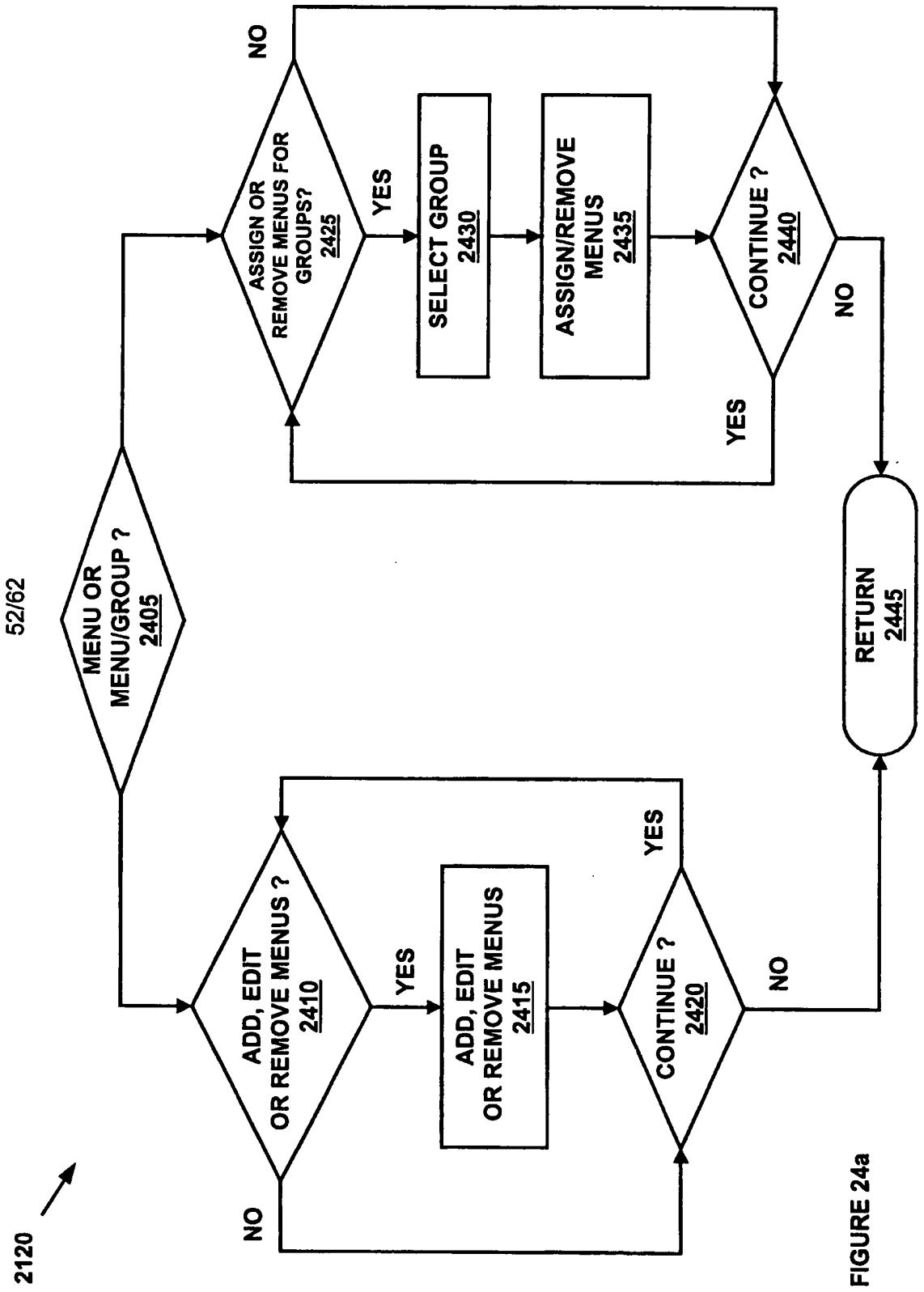

Group Details: ADMIN
ADMIN
Administrator
MR. ADMIN
* - Required field

FIGURE 23c



52/62

FIGURE 24a

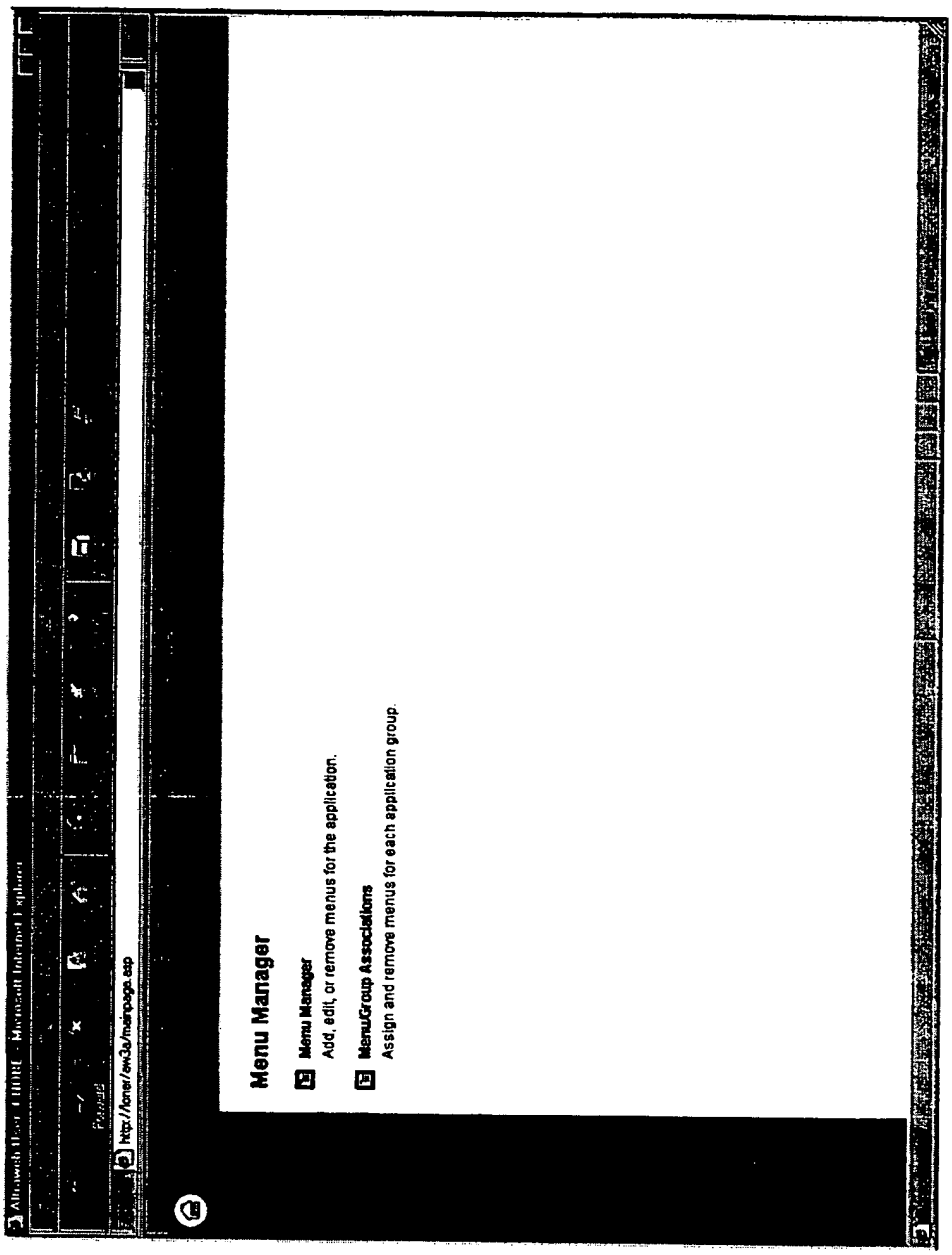

Menu Manager
Menu Manager
Add, edit, or remove menus for the application.
MenuGroup Associations
Assign and remove menus for each application group.

FIGURE 24b

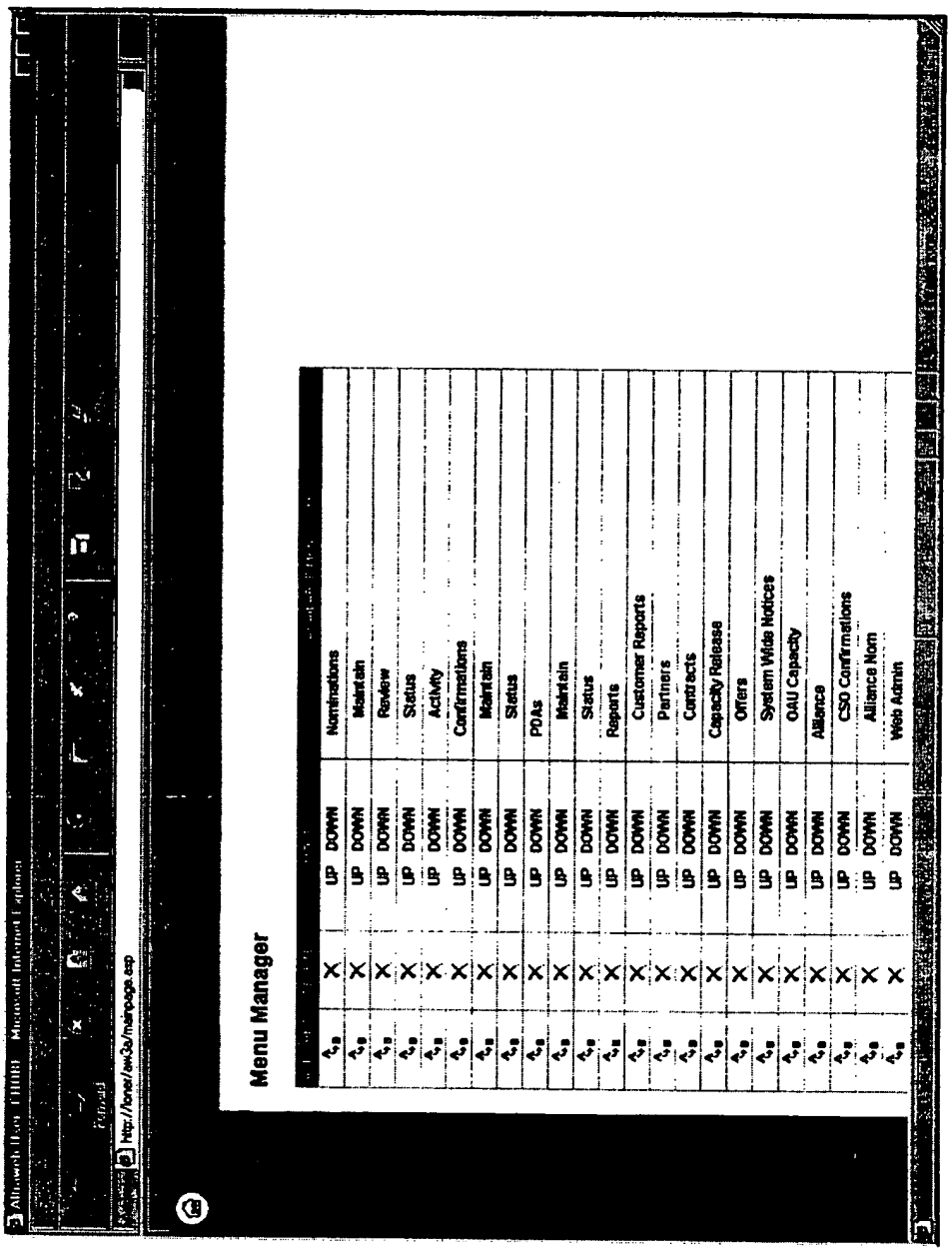

Menu Manager
UP
DOWN
Nominations
Maintain
Review
Status
Activity
Confirmations
Maintain
Status
POAs
Maintain
Status
Reports
Customer Reports
Partners
Contracts
Capacity Release
Offers
System Wide Notices
OAU Capacity
Alliance
CSO Confirmations
Alliance Nom
Web Admin

FIGURE 24c

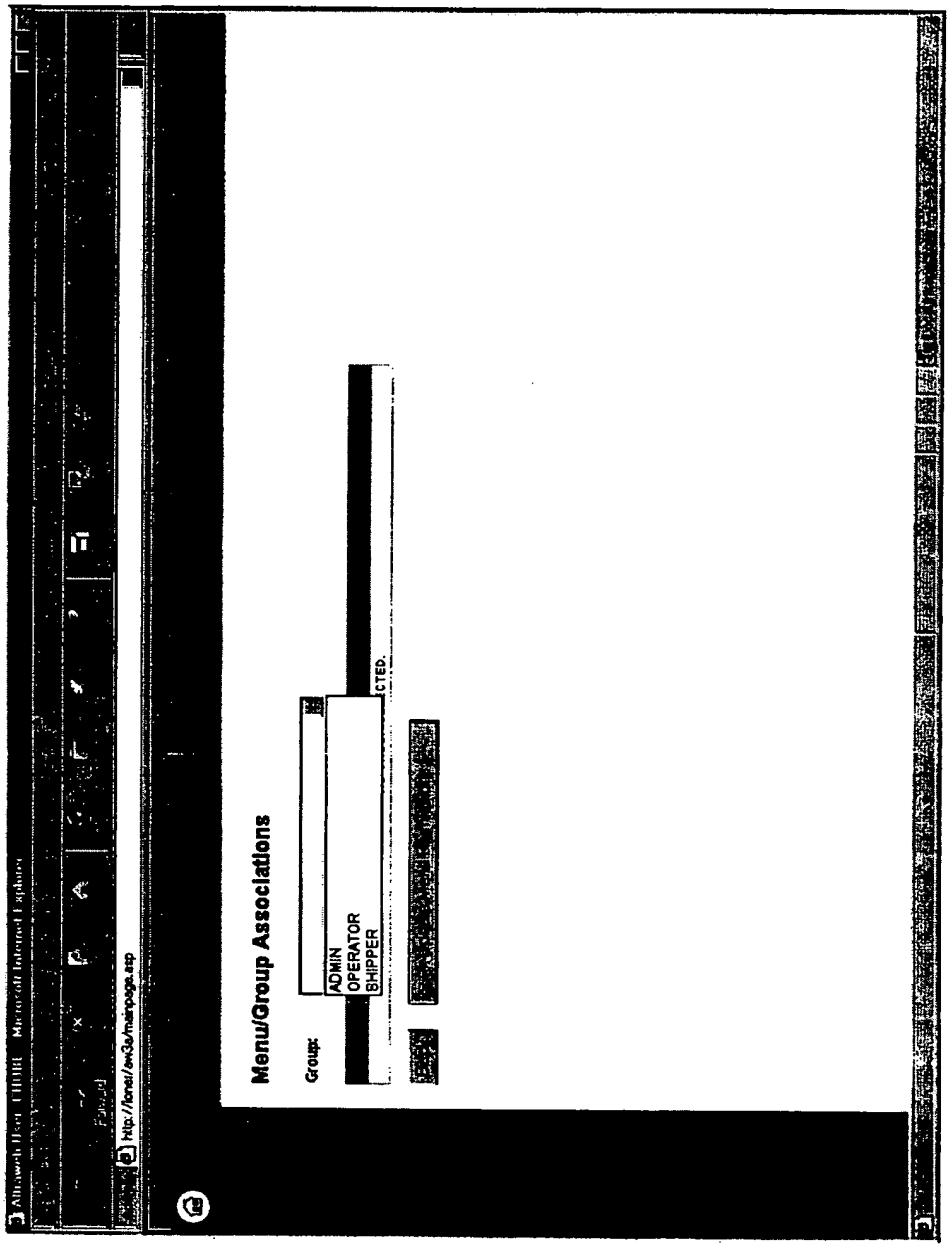


FIGURE 24d

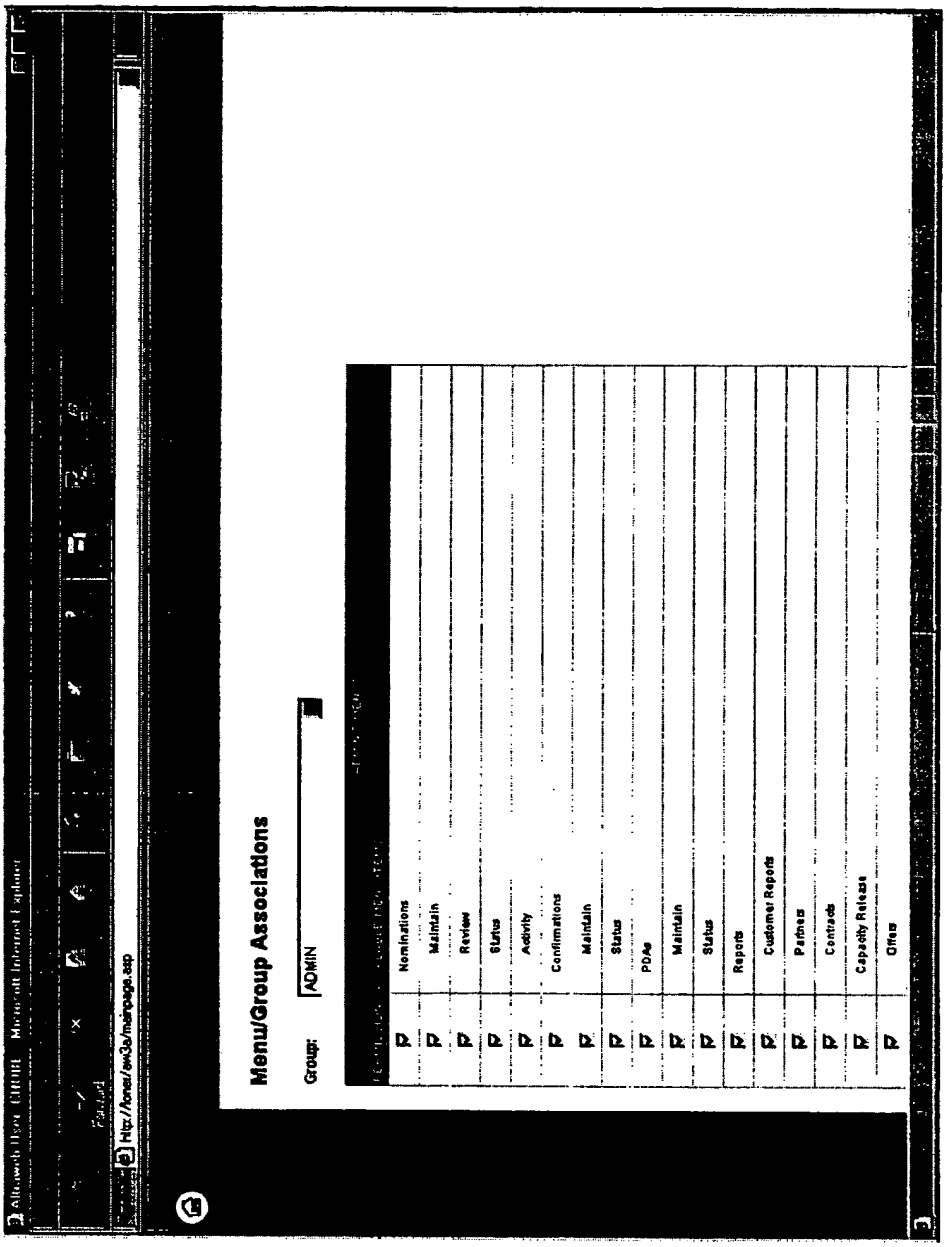

Menu/Group Associations
Group:
ADMIN
Nominations
Maintain
Review
Status
Activity
Confirmations
Maintain
Status
PDAs
Maintain
Status
Reports
Customer Reports
Partners
Contracts
Capacity Release
Offers

FIGURE 24e

2125

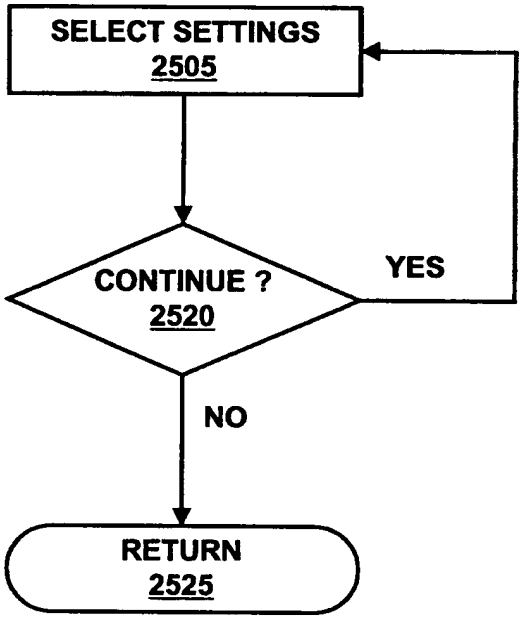


FIGURE 25a

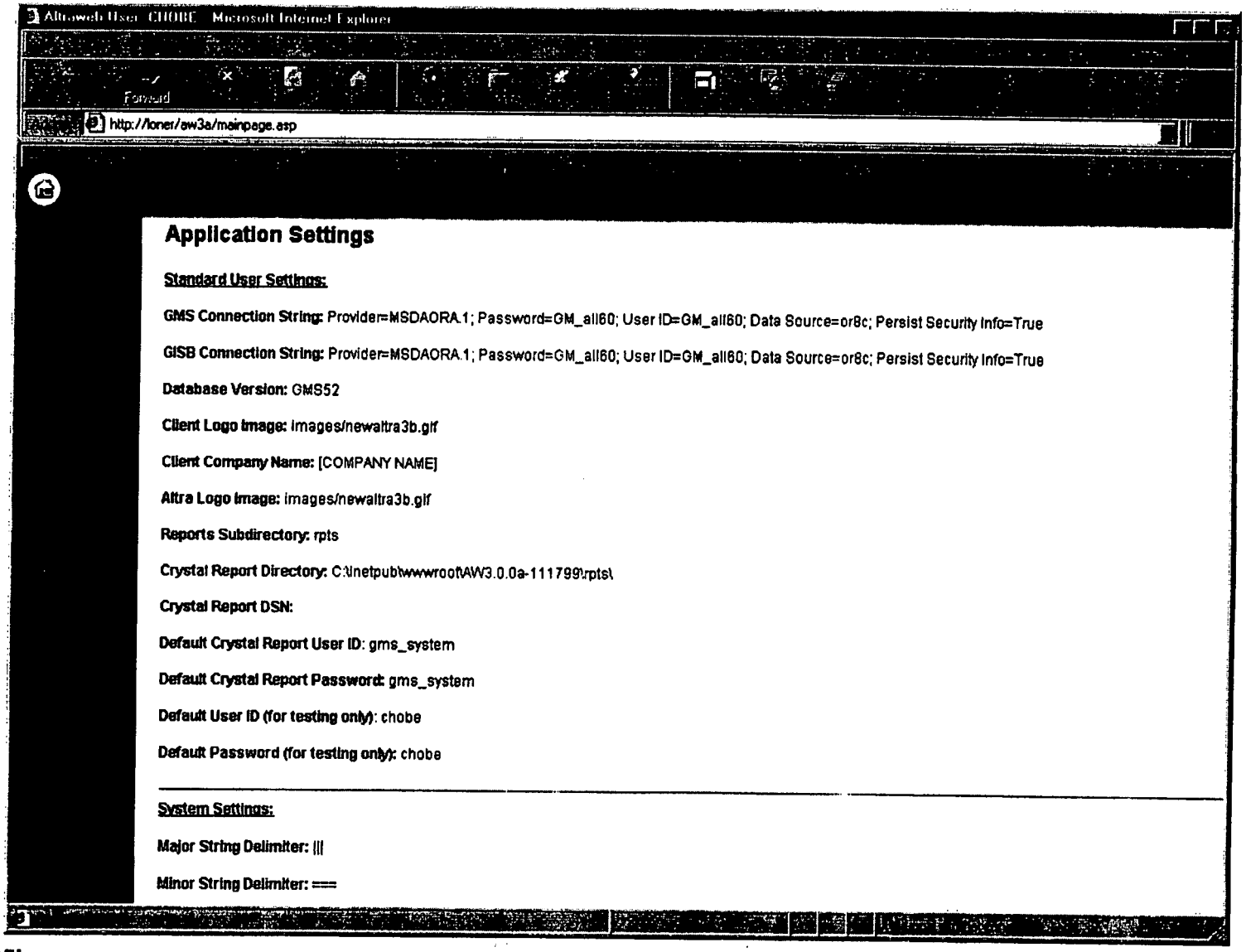


FIGURE 25b

2130

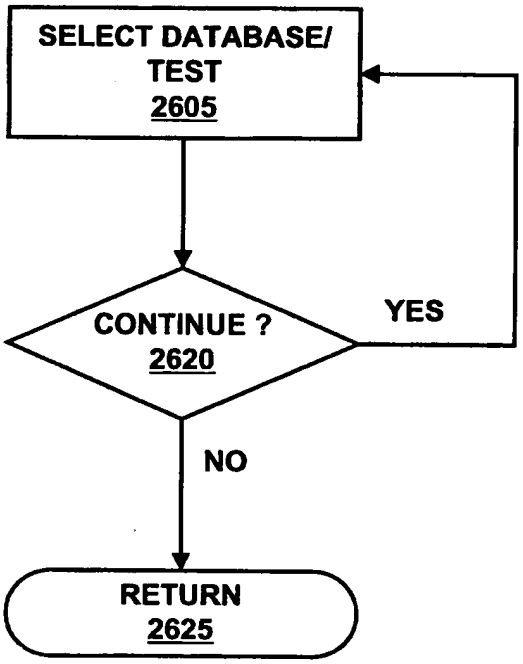


FIGURE 26a

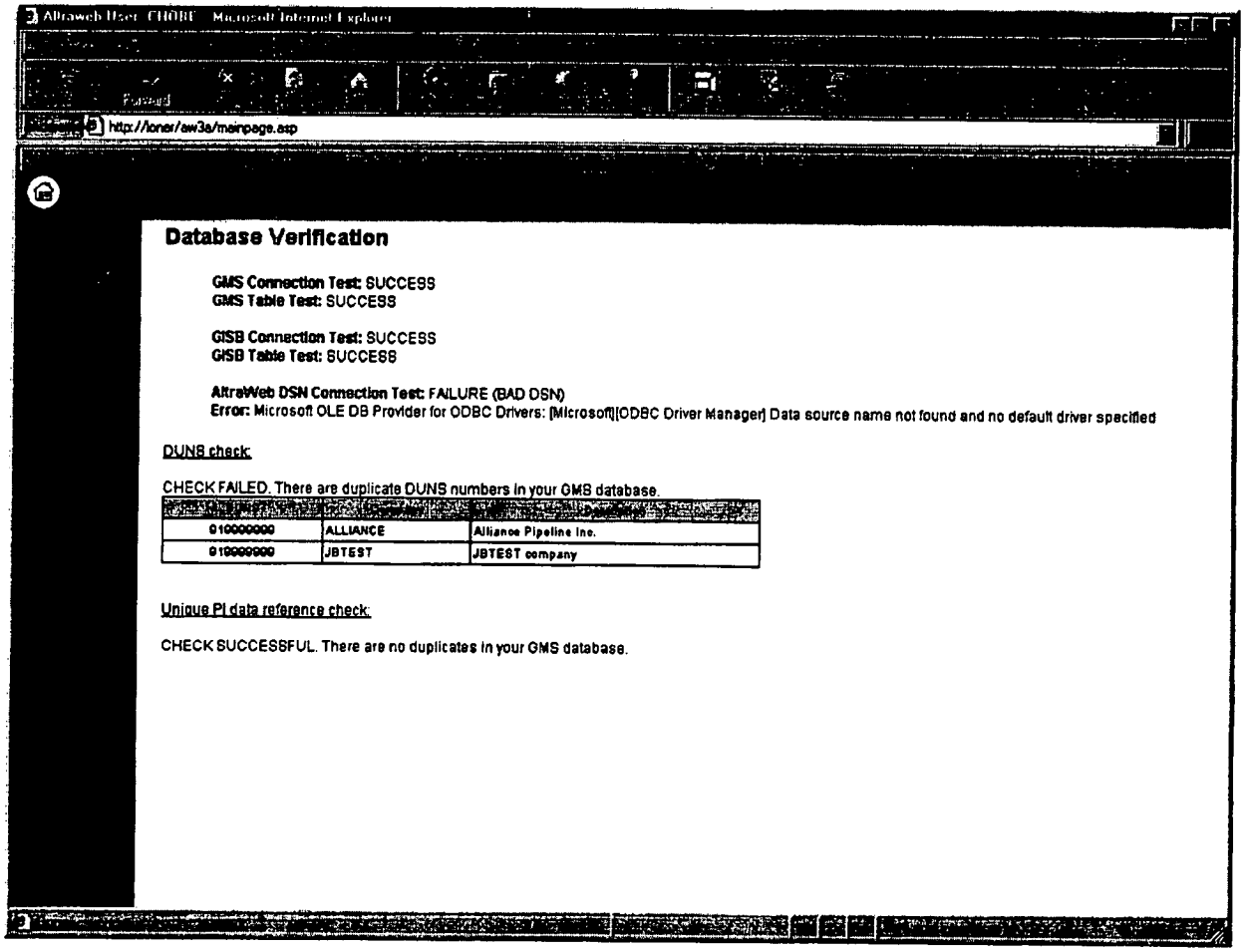


FIGURE 26b

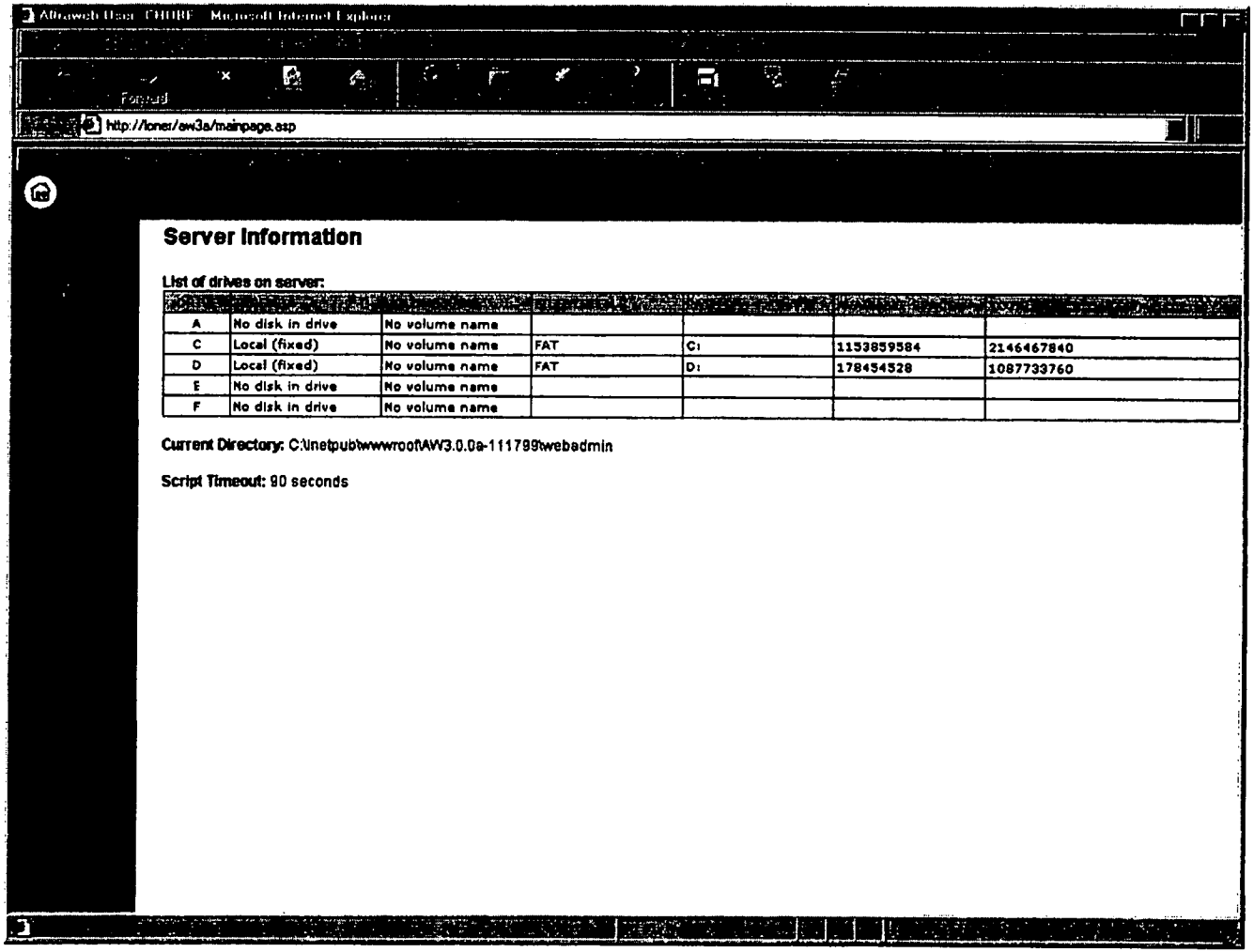


FIGURE 27a

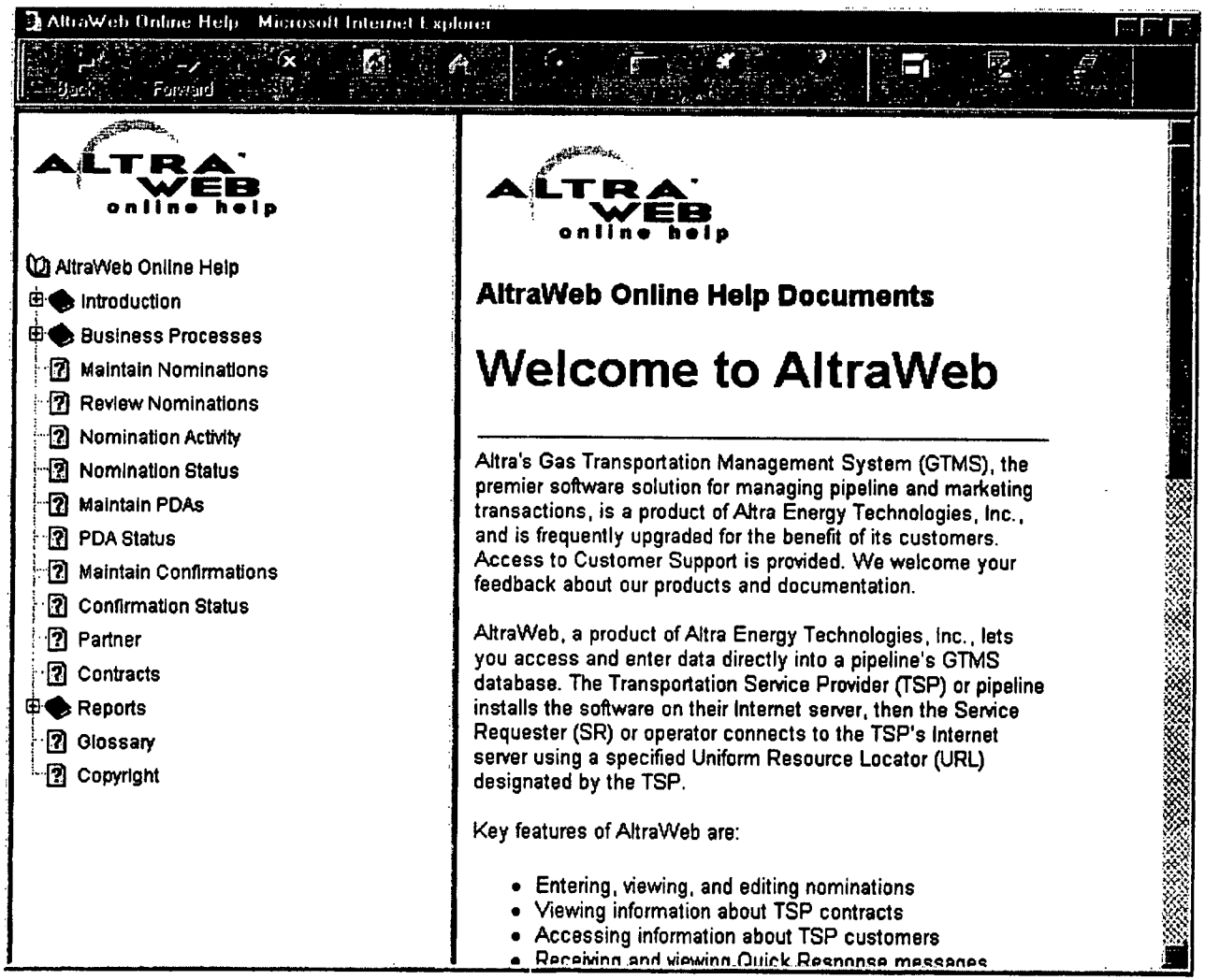
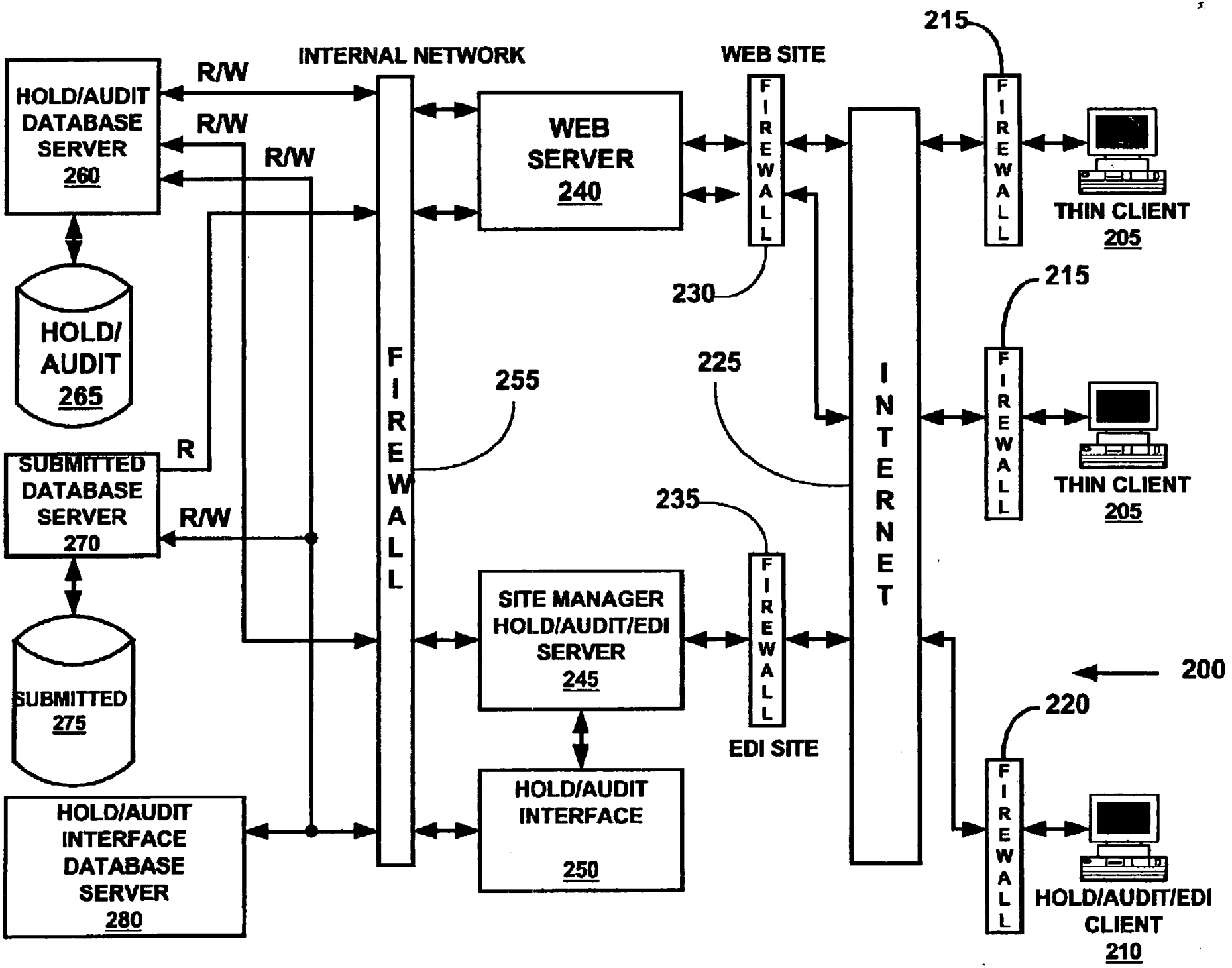


FIGURE 28a


HOLD/AUDIT DATABASE SERVER 260
R/W
R/W
R/W
INTERNAL NETWORK
WEB SITE
215
WEB SERVER 240
FIREWALL
FIREWALL
THIN CLIENT 205
230
HOLD/ AUDIT 265
215
255
225
FIREWALL
INTERNET
SUBMITTED DATABASE SERVER 270
R
R/W
235
FIREWALL
THIN CLIENT 205
SITE MANAGER HOLD/AUDIT/EDI SERVER 245
200
220
SUBMITTED 275
EDI SITE
HOLD/AUDIT INTERFACE 250
FIREWALL
HOLD/AUDIT INTERFACE DATABASE SERVER 280
HOLD/AUDIT/EDI CLIENT 210